



June 5, 2018



Division of Air Pollution Control-Permit Section Illinois Environmental Protection Agency 1021 North Grand Avenue East Springfield, Illinois 62702

Re: Construction Permit Application for Sterigenics Willowbrook I and II Facility I.D. No: 043110AAC

To Whom It May Concern:

Enclosed please find a Construction Permit Application to route the existing back vents on our commercial sterilization units to existing emissions control equipment in our Willowbrook facility. We are requesting this modification to reduce our emissions of Ethylene Oxide (EO) and Propylene Oxide (PO). We have determined that the proposed emissions reduction will reduce our potential to emit to less than major source status.

The Willowbrook I sterilization chambers (SC-1, SC-2, SC-3 and SC-5) and Willowbrook II sterilization chambers (SC-4) exhaust via a vacuum pump and backvents. The backvent emissions are exhausted uncontrolled to atmosphere as allowed. This modification requests to duct these existing backvents to existing emission control devices and to reduce the emission limits to reflect potential emissions. In addition, the current emission limit for Willowbrook I Aeration room exceeds potential to emit and this modification requests this emission limit to reflect potential emissions.

We therefore request the agency's approval to connect our existing backvents to the existing emissions control devices in Willowbrook I and II and reduce our emission limitations to reflect potential to emit. Enclosed are the necessary forms/descriptions of the process and emissions. We have also enclosed a check for five hundred dollars (\$500) along with the Fee Determination Form 197. Please do not hesitate to contact me to further discuss this matter. You can reach me at 630-928-1724 or email: lhartman@sterigenics.com.

Best Regards,

Laura Hartman Manager EH&S

Enclosures:

Laura Hartin

b.	×

Illinois Environmental Protection Agency Division Of Air Pollution Control — Permit Section P.O. Box 19506 Springfield, Illinois 62794-9506

For Illinois EPA use only **Construction Permit Application** ID No.: for a Appl. No.: **Proposed Project** Date Rec'd: at a CAAPP Source Chk No./Amt:

Permit Program (CAAPP) source, includir	10 construction of a new	w CAAPI	Psource Deta	a proposed project Involving a Clean Air A illed information about the project must als ns For Permit Applications," Form APC-20	_
	Propose	ed Pr	oject		
Working Name of Proposed	•	-			
Sterilizer Back Vent Emissions Co					
	ovide BOA ID Num	ıber: <u>04</u>	3110AAC	` ` `	
	ovide Permit Numb	oer: <u>1</u>	<u> 1050010&0</u> :	5 <u>120010</u>	
4. Brief Description of Proposed Project: Modify the duct for the existing back vents to route emissions to existing scrubbers with dry beds. Currently the back vent emissions are uncontrolled and exhausted directly to atmosphere. Also update the emission limits to match the new potential to emit based on controlled emissions.					
	Source In	eform	etion		
1. Source name:* Sterigenics US	S, LLC				\dashv
2. Source street address:* 7775 (Quincy Street and t	830 Mi	idway		
3. City: Willowbrook	4. County: DuPa	age		5. Zip code:*60521	
	THE FOLLOWING FO	OR A SC	URCE WITHO	UT AN ID NUMBER	
Is the source located within city If no, provide Township Nan	ne:	▼ Yes	□ No		
7. Description of source and prod Commercial Sterilizer of medical p	uct(s) produced:	_	8. Primary	Classification Code of source:	
Commercial Sterlizer of medical p	roducts and spices	5.		or NAICS: 561910	
9. Latitude (DD:MM:SS.SSSS):		10.	Longitude (D	DD:MM:SS.SSSS):	
* Is information different than previous If yes, then complete Form CAAPP 27	information? '3 to apply for an Adr	ministra	Yes	to the CAAPP Permit for the source.	
ld	entification of				٦
Who is the applicant? Nowner □ Operator	2. All cor	rrespo	ndence to: (ce X Ov		7
3. Applicant's FEIN: 4. Attention name and/or title for written correspondence: Laura Hartman, EHS Manager					

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

	Owner Inform	ation*						
1. Name: Sterigenics US, LLC								
2. Address: 2015 Spring Road , S	Suite 650							
0.0%	4 State:		5. Zip code: 60523					
3. City: Oak Brook	4. State: IL		60523					
* Is this information idifferent than previous information? Yes 🗵 No If yes, then complete Form CAAPP 273 to apply for an Administrative Change to the CAAPP Permit for the source.								
	r Information (if dif	ferent fron	n owner)*					
1. Name Sterigenics US, LLC								
2. Address: 7775 Quincy Street a	nd 830 Midway							
			Ì					
2 03.	A State:		5. Zip code: ₆₀₅₂₃					
3. City: Willowbrook	4. State: IL	FE	3. Zip code 60523					
* Is this information different than pre If yes, then complete Form CAAPP 2	vious information? Yes 73 to apply for an Administ	No No rative Change	to the CAAPP Permit for the source.					
	chnical Contacts f							
Preferred technical contact: (cl	heck one) X Appl	icant's contac	ct Consultant					
Applicant's technical contact p Laura Hartman	erson for application:							
3. Contact person's telephone nu	ımber(s)		person's e-mail address:					
630-928-1724 5. Consultant for application:		Inartmane	@sterigenics.com					
n/a								
Consultant's telephone number n/a	er(s):	7. Consultant's e-mail address:						
		····						
Othor	Addresses for the	Permit Ar	policant					
	E THE FOLLOWING FOR A							
1. Address for billing Site Fees for the source: Source Other (provide below):								
2. Contact person for Site Fees:		3. Contact	person's telephone number:					
4. Address for Annual Emission	Report for the source:	Source	Other (provide below):					
5. Contact person for Annual Em	nission Report:	6. Contact	person's telephone number:					

Review Of Contents of the Application									
NOTE: ANSWERING "NO" TO THESE ITEMS MAY RESULT IN THE APPLICATION BEING DEEMED INCOMPLETE									
Does the application include a narrative description of the proposed project?	X Yes ☐ No								
Does the application clearly identify the emission units and air pollution control equipment that are part of the project?	X Yes □ No								
Does the application include process flow diagram(s) for the project showing new and modified emission units and control equipment, along with associated existing equipment and their relationships?	X Yes No								
Does the application include a general description of the source, a plot plan for the source and a site map for its location?	☐ Yes ☐ No 🕱 N/A* * Material previously provided								
Does the application include relevant technical information for the proposed project as requested on CAAPP application forms (or otherwise contain all relevant technical information)?	¥ Yes □ No								
6. Does the application include relevant supporting data and information for the proposed project as provided on CAAPP forms?	X Yes □ No								
7. Does the application identify and address all applicable emission standards for the proposed project, including: State emission standards (35 IAC Chapter I, Subtitle B); Federal New Source Performance Standards (40 CFR Part 60)?	▼ Yes □ No								
Does the application address whether the project would be a major project for Prevention of Significant Deterioration, 40 CFR 52.21?	X Yes No N/A								
Does the application address whether the project would be a major project for "Nonattainment New Source Review," 35 IAC Part 203?	X Yes □ No □ N/A								
Does the application address whether the proposed project would potentially be subject to federal regulations for Hazardous Air Pollutants (40 CFR Part 63) and address any emissions standards for hazardous air pollutants that would be applicable?	Yes No N/A* * Source not major Project not major								
11. Does the application include a summary of annual emission data for different pollutants for the proposed project (tons/year), including: 1) The requested permitted emissions for individual new, modified and affected existing units*, 2) The past actual emissions and change in emissions for individual modified units* and affected existing units*, and 3) Total emissions consequences of the proposed project? (* Or groups of related units)	Yes No N/A * The project does not involve an increase in emissions from new or modified emission units.								
12. Does the application include a summary of the current and requested potential emissions of the source (tons/year)?	Yes No N/A* * Applicability of PSD, NA NSR or 40 CFR 63 to the project is not related to the source's emissions.								
13. Does the application address the relationships and implications of the proposed project on the CAAPP Permit for the source?	Yes No N/A* *CAAPP Permit not issued								
14. If the application contains information that is considered a TRADE SECRET, has it been properly marked and claimed and all requirements to properly support the claim pursuant to 35 IAC Part 130 been met? Note: "Claimed" information will not be legally protected from disclosure to the public if it is not properly claimed or does not qualify as trade secret information.	Yes No N/A* * No information in the application is claimed to be a TRADE SECRET								
15. Are the correct number of copies of the application provided? (See Instructions for Permit Applications, Form 201)	X Yes ☐ No								
16. Does the application include a completed "FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION," Form 197-FEE, a check in the amount indicated on this form, and any supporting material needed to explain how the fee was determined?	X Yes								

Authorized Signature:

! certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete and that I am a responsible official for the source, as defined by Section 39.5(1) of the Environmental Protection Act.

BY:

WHITE WALL

VP of EH&S

AUTHORIZED

SIGNATURE

Kathleen Hoffman

TYPED OR PRINTED NAME OF SIGNATORY

DATE

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Sterilizer Back Vent Emissions Control

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14.		

EXHIBIT 199-1

NARRATIVE DESCRIPTION OF PROPOSED PROJECT- BACKVENT CONTROL

The facility is a medical sterilization facility located at 7775 Quincy Street (WBI) and 830 Midway (WBII), Willowbrook, Illinois.

The sterilization facility utilizes ethylene oxide (EO) as the principle sterilant gas, although propylene oxide is sometimes used. All associated equipment and processing areas associated with sterilant use are covered under our current CAAPP Permit #95120085.

As part of the sterilization process, products are sterilized in one of the sterilization chambers. The sterilization chambers exhaust the majority of emissions through the vacuum pumps and the vacuum pump emissions are controlled by existing scrubbers. The remaining emissions from the sterilization chambers are exhausted, uncontrolled, to atmosphere through back vents.

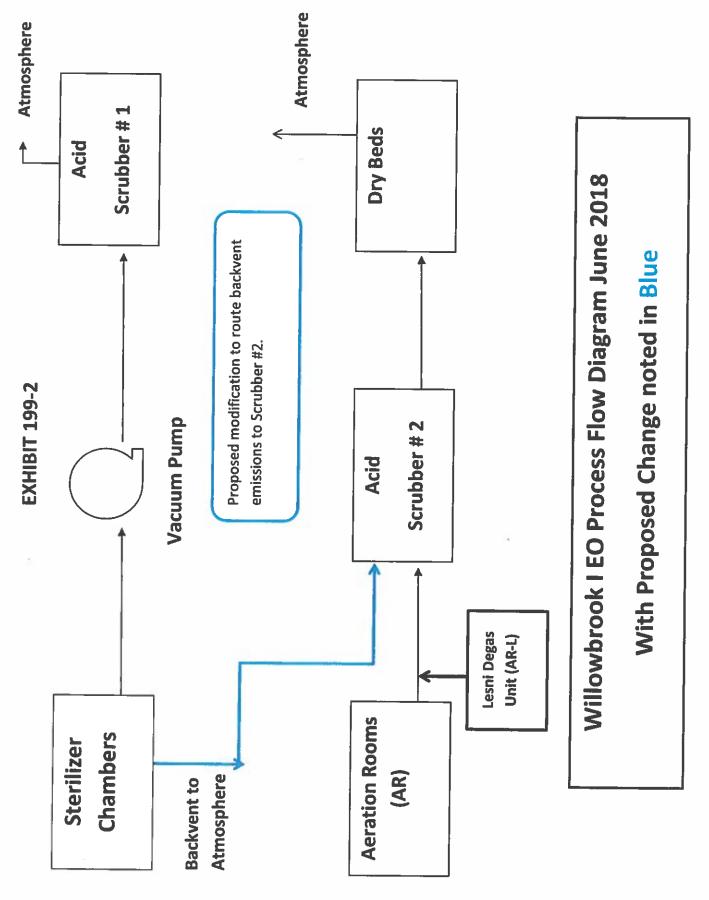
Once the sterilization chamber process is complete, the products are removed from the sterilization chamber and placed into aeration rooms to further off gas low levels of EO. The aeration rooms exhaust emissions to existing acid scrubbers with dry bed reactors.

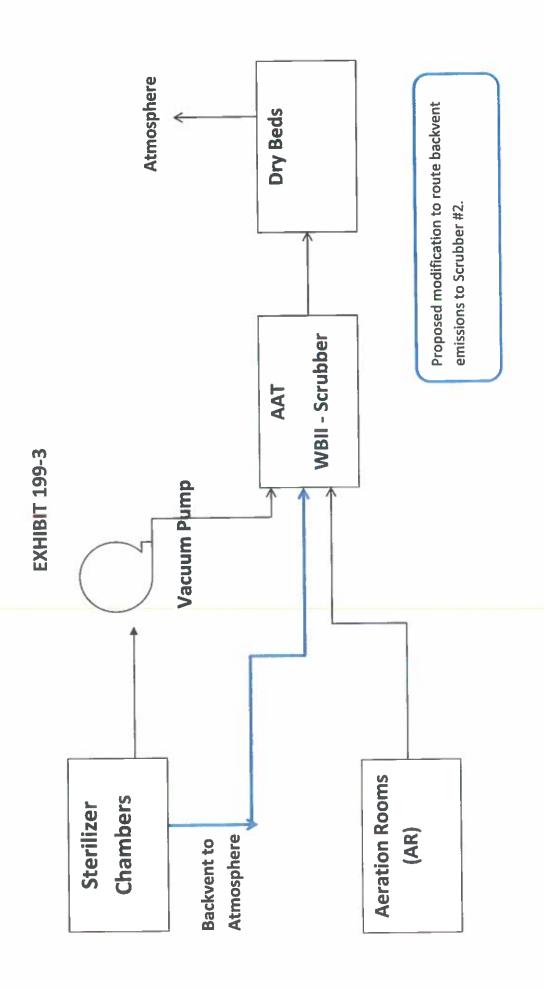
This permit application is requesting to duct the back vent emissions of the permitted chambers to the existing acid scrubbers with dry bed reactors. In Willowbrook I, the back vents for emission units SC-1, 2, 3, and 5 would be ducted to the existing Advanced Air Technologies (AAT) wet acid scrubber with dry bed reactor (Scrubber #2). In Willowbrook II, the back vents for emission units SC-4 would be ducted to the existing WB II Advanced Air Technologies (AAT) wet acid scrubber with dry bed reactor (WBII-Scrubbers).

In addition, this permit application is requesting to modify the existing EO and Volatile Organic Material (VOM) emission limits to align with the potential emissions. Emission calculations are enclosed and include 2017 emissions and potential emissions based on current EO and VOM usage limitations. Please refer to the emissions table in Exhibit 220A and 220B.

This proposed project would reduce the uncontrolled EO emissions from the back vents by a control efficiency of at least 99%, and therefore would not be a major modification pursuant to 40 CFR 52.21 or 35 IAC Part 203. Also, the modification would reduce the potential emissions of Hazardous Air Pollutants to less than 10 tons per year and therefore, the facility would no longer be considered a major source under CAAPP regulations.

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Willowbrook II EO Process Flow Diagram June 2018 With Proposed Change noted in Blue

List of Emission Units Covered in Permit Application

A permit exists for the emission units referred to in this permit application. This permit application requests to duct existing backvents from the Willowbrook I and II Sterilization Chambers listed below to existing control devices. In addition, this permit application requests to modify the emission limits for the Willowbrook I and II Sterilization Chambers and Willowbrook I Aeration Room listed below to reflect potential emissions.

List of Sterilization Chambers to duct backvent to existing controls:

- 1. WB1 SC1 Six 6-pallet Chambers
- 2. WB1 SC2 Six 13-pallet Chambers
- 3. WB1 SC3 One 3 pallet Chamber
- 4. WB1 SC5 One 1 pallet Chamber
- 5. WB2 SC4 Three 13 pallet and One 26 pallet Chamber

List of emission units to modify permitted emission limits:

- 1. WB1 SC1 Six 6-pallet Chambers
- 2. WB1 SC2 Six 13-pallet Chambers
- 3. WB1 SC3 One 3 pallet Chamber
- 4. WB1 SC5 One 1 pallet Chamber
- 5. WB1 AR Three Aeration Rooms
- 6. WB2 SC4 Three 13 pallet and One 26 pallet Chamber

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION P.O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE						
Revision #:						
Date:	_ / _		/			
Page		of				
Source Designation:						

	FOR AGENCY USE ONLY					
	ID NUMBER:					
PROCESS EMISSION UNIT						
DATA AND INFORMATION	EMISSION POINT #:					
	DATE:					
SOURCE	IFORMATION					
1) SOURCE NAME:	II ONWATION					
Sterigenics US, LLC						
2) DATE FORM	3) SOURCE ID NO.					
PREPARED: 30 May 2018	(IF KNOWN): 043110AAC					
GENERAL II 4) NAME OF EMISSION UNIT:	NFORMATION					
(6) Ethylene Oxide/Propylene oxide Sterilization	Chambers (6 pallet capacity) SC-1					
5) NAME OF PROCESS:						
Sterilization of medical products and spices						
6) DESCRIPTION OF PROCESS:						
Chemical Sterilization						
7) DESCRIPTION OF ITEM OR MATERIAL PRODUCED OR A	CTIVITY ACCOMPLISHED:					
Sterilized Medical Supplies and Treated Spices						
8) FLOW DIAGRAM DESIGNATION OF EMISSION UNIT:						
Sterilizer Chambers						
9) MANUFACTURER OF EMISSION UNIT (IF KNOWN):						
Unknown						
10) MODEL NUMBER (IF KNOWN):	11) SERIAL NUMBER (IF KNOWN):					
unknown	unknown					
12) DATES OF COMMENCING CONSTRUCTION, OPERATION AND/OR MOST RECENT MODIFICATION	a) CONSTRUCTION (MONTH/YEAR):					
OF THIS EMISSION UNIT (ACTUAL OR PLANNED)	June 1984					
,	b) OPERATION (MONTH/YEAR):					
	May 1985					
	c) LATEST MODIFICATION (MONTH/YEAR):					
	November 1990					
13) DESCRIPTION OF MODIFICATION (IF APPLICABLE):						
The sterilization chambers includes the chamber v						
vent (backvent) as one emission unit. The chambe						
aumosphere. This modification proposes to control	the backvent with scrubber #2 and dry bed reactor.					

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINO'S REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPLICATION PAGE 10

FOR APPLICANT'S USE

14) DOES THE EMISSION UNIT HAV	E MOI	RE THAN ONE	MODE	OF O	PERATIO	N?	(X) YE	S) NO
IF YES, EXPLAIN AND IDENTIFY WHICH MODE IS COVERED BY THIS FORM (NOTE: A SEPARATE PROCESS EMISSION UNIT FORM 220-CAAPP MUST BE COMPLETED FOR EACH MODE): The sterilization chambers includes the chamber vent (via vacuum pump) and the chamber exhaust											
The sterilization chambers inclu	ides 1	he chambe	r vent	(via v	acuum p	oum	p) and the	chami	ber	exhai	ust
vent (backvent) as one emission	n uni	t. The chan	nber b	ackve	ent modif	ficat	ion is cove	red by	this	s form	n. The
chamber vent is controlled by V											
15) PROVIDE THE NAME AND DESI EMISSION UNIT, IF APPLICABLE MUST BE COMPLETED FOR EA	(FOR	M 260-CAAPF M OF AIR PO	AND T	THE AF	PROPRIA NTROL EC	TE 2 QUIP	260-CAAPP A MENT):	DDEN	DUM	FORM	AIS A
The chamber backvent is currently uncontrolled. This application proposes to duct the chamber											
exhaust vent (backvent) to the existing Acid Scrubber (scrubber #2) with Dry Bed Reactor. The											
information provided below is required for the existing control device.											
16) WILL EMISSIONS DURING STARTUP EXCEED EITHER THE ALLOWABLE EMISSION RATE PURSUANT TO A SPECIFIC RULE, OR THE ALLOWABLE EMISSION LIMIT AS ESTABLISHED BY AN EXISTING OR PROPOSED PERMIT CONDITION?											
IF YES, COMPLETE AND ATTACH FORM 203-CAAPP, "REQUEST TO OPERATE WITH EXCESS EMISSIONS DURING STARTUP OF EQUIPMENT".											
17) PROVIDE ANY LIMITATIONS ON SOURCE OPERATION AFFECTING EMISSIONS OR ANY WORK PRACTICE STANDARDS (E.G., ONLY ONE UNIT IS OPERATED AT A TIME):											
Monthly usage limitations for p	ropyle	ene oxide ai	nd eth	ylene	oxide st	nall	not exceed	2800	por	ınds a	and
70,000 pounds respectively for	all e	mission unit	s in V	∕illowt	rook l						
										-	
		OPERATI	NG IN	IFORI	MATION	_	<u> </u>				
18) ATTACH THE CALCULATIONS,	то тн	F FXTENT TH	IEY AR	E AIR	EMISSION	IRE	LATED, FROI	M WHIC	H TI	HE	_
FOLLOWING OPERATING INFO BASED AND LABEL AS EXHIBIT	RMAT 220-1	ON, MATERIA REFER TO	AL USA SPECI	AL NOT	ES OF FO	ON A	202-CAAPP.	AGE D	AIA	WERE	=
19a) MAXIMUM OPERATING HOUR	S	HOURS/DAY	1		DAYS/W	EEK		WEEK			
8760 per year		24	4			7 52					
b) TYPICAL OPERATING HOURS		HOURS/DAY	(1)		DAYS/W	EEK: WEE			EKS/YEAR:		
8600 per year		24	4			7				52	
20) ANNUAL THROUGHPUT		DEC-FEB(%):::	MAR	MAY(%):		JUN-AUG(%		SE	P-NO	V(%):
, ·		25		İ	25		25			25	5
		<u> </u>		<u>'</u>							
	M	ATERIAL L	ISAG	E INF	ORMAT	ION					
		MAXIML	JM RAT	ΓES		Γ	Т	YPICAL	RA	TES	
21a) RAW MATERIALS		BS/HR		TONS/	YEAR	-	LBS/HR		T	TONS	S/YEAR
Ethylene Oxide					420						
Propylene oxide					17						
1 Topyletic Oxide						ŀ					
			-			ŀ		-	-		
			\vdash			-		_	\vdash		
									L		
						ľ					

	MAXIM	UM RATES	TYPICA	AL RATES		
21b) PRODUCTS	LBS/HR	TONS/YEAR	LBS/HR	TONS/YEAR		
N/A				1977		
IV/A						
_						
	MAXIM	UM RATES	TYPICA	L RATES		
21c) BY-PRODUCT MATERIALS	LBS/HR	TONS/YEAR	LBS/HR	TONS/YEAR		
N/A						
DO-LAMAVIBURA FIDINO DATE		USAGE DATA				
22a) MAXIMUM FIRING RATE (MILLION BTU/HR):	b) TYPICAL F (MILLION	FIRING RATE BTU/HR):	c) DESIGN CAPACI RATE (MILLION	TY FIRING BTU/HR):		
N/A		N/A	N/A			
d) FUEL TYPE:						
ONATURAL GAS OFUE	L OIL: GRADE NUM	BER Oc	AL OTHER_			
IF MORE THAN ONE FUEL IS U	SED, ATTACH AN I	EXPLANATION AND LABE	EL AS EXHIBIT 220-2.			
e) TYPICAL HEAT CONTENT OF F BTU/GAL OR BTU/SCF):	UEL (BTU/LB,	f) TYPICAL SULFI GAS):	UR CONTENT (WT %.	NA FOR NATURAL		
g) TYPICAL ASH CONTENT (WT 9 GAS):	%., NA FOR NATUR		USAGE (SPECIFY U			
23) ARE COMBUSTION EMISSIONS PROCESS UNIT EMISSIONS?	DUCTED TO THE	SAME STACK OR CONTR	ROL AS	YES NO		
IF NO, IDENTIFY THE EXHAUST	POINT FOR COME	BUSTION EMISSIONS:				

29) DOES THE EMISSION UNIT OTHERWISE APPLICABLE		IPTION FROM AN	YES	⊗ NO					
EXEMPTION. PROVIDE A D SUPPORTING DATA AND C	DETAILED EXPLANATION CALCULATIONS. ATTACH	I JUSTIFYING THE EXEMPTIC I AND LABEL AS EXHIBIT 220	IN. INCLUDE D	ETAILED					
	COMPLIAN	ICE INFORMATION							
30) IS THE EMISSION UNIT IN			(2)						
REQUIREMENTS?			YES	U NO					
IF NO, THEN FORM 294-CA COMPLYING EMISSION UN	APP "COMPLIANCE PLAI IITS" MUST BE COMPLET	N/SCHEDULE OF COMPLIANO ED AND SUBMITTED WITH T	E ADDENDUI HIS APPLICATIO	NON FOR NON					
31) EXPLANATION OF HOW IN	ITIAL COMPLIANCE IS TO	BE, OR WAS PREVIOUSLY,	DEMONSTRAT	ED:					
		•							
	,,,								
32) EXPLANATION OF HOW ON	GOING COMPLIANCE W	III BE DEMONSTRATED	·						
Records of Ethylene Oxide (EO) and Propylene Oxide (PO) usage. (monthly)									
WB1 Scrubber 2 is require	ed to monitor scrubbe	r liquor level weekly, pH v	veeklv.						
				i+					
	ou weekly to determin	ne proper operation of the	Diy Ded Oil	·k.					
				i					
33a) LIST THE PARAMETERS T	HAT RELATE TO AIR EM	ISSIONS FOR WHICH RECOR	DS ARE BEING	MAINTAINED TO					
METHOD OF MEASUREME	APPLICABILITY OR COMP	PLIANCE. INCLUDE THE UNIT	OF MEASURE	MENT, THE					
METHOD OF MEASUREME	INT, AND THE PREQUEN	CT OF SUCH RECORDS (E.G	., MOURLY, DAI	LY, WEEKLY):					
PARAMETER	EXEMPTION, PROVIDE A DETAILED EXPLANATION JUSTIFYING THE EXEMPTION SUPPORTING DATA AND CALGULATIONS. ATTACH AND LABEL AS EXHIBIT 220-3 ATTACHMENT(S) WHICH ADDRESS AND JUSTIFY THIS EXEMPTION. COMPLIANCE INFORMATION IS THE EMISSION UNIT IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS? IF NO, THEN FORM 294-CAAPP "COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE COMPLYING EMISSION UNITS" MUST BE COMPLETED AND SUBMITTED WITH THE EXPLANATION OF HOW INITIAL COMPLIANCE IS TO BE, OR WAS PREVIOUSLY, Detailed on the control of the structure of the control of the parameters that relate to air emissions for which record determine proper operation of the control of		<u>VT F</u>	REQUENCY					
Sterilant Usage	pounds	Operating data	mont	hlv I					
	COMPLIANCE INFORMATION COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE INFORMATION	week	<u> </u>						
			─	·					
LOCUIC	hhiii	GLC from dry bed	week	<u>'y</u>					
			_						
			1 1						

RECORDED PARAME	TER INCLUDE THE METHOD	CORDS WILL BE CREATED AND M O OF RECORDKEEPING, TITLE OF P ONTACT FOR REVIEW OF RECORD	PERSON RESPONSIBLE FOR										
PARAMETER	METHOD OF RECORDKEEPING	TITLE OF PERSON RESPONSIBLE	TITLE OF CONTACT PERSON										
Sterilant usage	Operating report	General Manager	EH&S										
Liquor Level	PM records	General Manager	EH&S										
EO conc	PM Records	General Manager	EH&S										
- NE COMPLIANCE OF THE	F FMICCION UNIT READII VI	DEMONSTRATED BY REVIEW OF											
THE RECORDS?	E EMISSION UNIT READILY	DEMONSTRATED BY REVIEW OF	X YES NO										
IF NO, EXPLAIN:													
			ļ										
d) ARE ALL RECORDS RE- SUBMITTAL TO THE AG	ADILY AVAILABLE FOR INSP ENCY UPON REQUEST?	PECTION, COPYING AND	✓ YES ✓ NO										
IF NO, EXPLAIN:													
	IF NO, EXPLAIN:												
34a) DESCRIBE ANY MONI	TORS OR MONITORING ACT	TIVITIES USED TO DETERMINE FEE	S, RULE APPLICABILITY OR										
COMPLIANCE													
	level of the scrubber liquintration entering and exit												
MONITOL THE ETO CONCE	to attorn critering and exit	, ing 110 / 0 (1 D /) D 0 D 0											
b) WHAT PARAMETER(S)	IS(ARE) BEING MONITORED	(E.G., VOM EMISSIONS TO ATMO	SPHERE)?										
Level of scrubber liquor													
EtO levels from the AA	T Dry Beds.												
c) DESCRIBE THE LOCAT	ION OF EACH MONITOR (E.C	G., IN STACK MONITOR 3 FEET FRO	OM EXIT):										

34d) IS EACH MONITOR EQUIPPED WITH A RECORDING DEVICE?	O YES	(X) NO
IF NO, LIST ALL MONITORS WITHOUT A RECORDING DEVICE:	O 123	C) NO
Records are kept manually		
e) IS EACH MONITOR REVIEWED FOR ACCURACY ON AT LEAST A QUARTERLY BASIS?	YES	O NO
IF NO, EXPLAIN:		
N/A		
f) IS EACH MONITOR OPERATED AT ALL TIMES THE ASSOCIATED EMISSION UNIT IS IN OPERATION?	O YES	X) NO
	— 123	<u> </u>
IF NO, EXPLAIN:		
No continuous monitoring is required.		
		1
35) PROVIDE INFORMATION ON THE MOST RECENT TESTS, IF ANY, IN WHICH THE RESU	LTS ARE USED	FOR
PURPOSES OF THE DETERMINATION OF FEES, RULE APPLICABILITY OR COMPLIANC DATE, TEST METHOD USED, TESTING COMPANY, OPERATING CONDITIONS EXISTING	E. INCLUDE TH	E TEST
SUMMARY OF RESULTS. IF ADDITIONAL SPACE IS NEEDED, ATTACH AND LABEL AS	EXHIBIT 220-4:	EST AND A
TEST DATE TEST METHOD TESTING COMPANY CONDITIONS	SUMMARY OF I	DECINTO
1/21/03 Kremer Env. Normal		
Normal Richard Life.	> 99% effici	ency
		2.7
20) DECORIGE ALL DEPOSTING DECORPORATION AND ADDRESS OF THE POST O		
36) DESCRIBE ALL REPORTING REQUIREMENTS AND PROVIDE THE TITLE AND FREQUEN SUBMITTALS TO THE AGENCY:	ICY OF REPORT	
REPORTING REQUIREMENTS TITLE OF REPORT	FREQUENCY	
Annual emissions report Annual emissions report annual	(per Title V)	
	(per Title V)	

					(37)E	MISSION I	(37)EMISSION INFORMATION				
			1 1ACTUAL EMISSION RATE UNCONTROLLED EMISSK	O 1ACTUAL EMISSION RATE O 1UNCONTROLLED EMISSION RATE	RATE		ALLOWABLE E	ALLOWABLE BY RULE EMISSION RATE	ON RATE	PERMITTED EMISSION RATE	SION RATE
REGULATED AIR POLLUTANT		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	3OTHER TERMS	3OTHER TERMS	4DM	⁵ RATE (UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON	MAXIMUM:				0.00						
MONOXIDE (CO)	TYPICAL:										
LEAD	MAXIMUM:						J				
	TYPICAL:						J				
NITROGEN	махімим:										
OXIDES (NOx)	TYPICAL:						Ĵ				
PARTICULATE	MAXIMUM:						J				
MATTER (PART)	TYPICAL:										
PARTICULATE MATTER <= 10	MAXIMUM:						J				
MICROMETERS (PM10)	TYPICAL:							Â			
SULFUR	MAXIMUM:										
DIOXIDE (SO2)	TYPICAL:										
VOLATILE	MAXIMUM:	see Ex								***	
MATERIAL (VOM)	TYPICAL:	220-B									
OTHER, SPECIFY:	MAXIMUM:	See Ex.					_				
	TYPICAL	220-B									
EXAMPLE: PARTICULATE	махамим:	5.00	21.9	0.3 GRØSCF		1	6.0 (LBS/HR)	212.321	26.28	5.5 LBS/HR	22
MATTER	TYPICAL	4.00	14.4	0.24 GR/DSCF		4	5.5 (LBS/HR)	212.321	19.80		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.

1 CHECK UNCONTROLLED EMISSION RATE BOX IF CONTROL EQUIPMENT IS USED, OTHERWISE CHECK AND PROVIDE THE ACTUAL EMISSION RATE TO ATMOSPHERE, INCLUDING INDOORS. SEE INSTRUCTIONS.

2 PROVIDE THE EMISSION RATE THAT WALL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.

3 PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G. PPM. GRUDSCF, ETC.)

4 DM • DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP 42 OR AIRS), 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP 42 OR AIRS)

5 RATE • ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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TED, ON WAICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.

¹PROVIDE UNCONTROLLED EMISSIONS IF CONTROL EQUIPMENT IS USED. OTHERWISE, PROVIDE ACTUAL EMISSIONS TO THE ATMOSPHERE, INCLUDING INDOORS. CHECK BOX TO SPECIFY.

2CAS - CHEMICAL ABSTRACT SERVICE NUMBER.

3PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GRÜDSCF, ETC.).

4DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE. 3) STANDARD EMISSION FACTOR (AP 42 OR AIRS. 4) ENGINEERING ESTIMATE. 5) SPECIAL EMISSION FACTOR (NOT AP 42 OR AIRS).

5RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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		T INFORMATION					
THIS SECTION SHOULD NOT BE COMPLETED		XHAUSTED THROUGH A	IR POLLUTION CONTROL EQUIPMENT:				
39) FLOW DIAGRAM DESIGNATION OF E	XHAUST POINT:						
WB1 Scrubber #2 with dry bed							
40) DESCRIPTION OF EXHAUST POINT (DISCHARGES INDOORS, DO NOT CO	STACK, VENT, RO IMPLETE THE REM	OF MONITOR, INDOO MAINING ITEMS.	RS, ETC.). IF THE EXHAUST POINT				
Outside Stack							
41) DISTANCE TO NEAREST PLANT BOL	INDARY FROM EXI	HAUST POINT DISCH	ARGE (FT):				
approx 20 feet							
42) DISCHARGE HEIGHT ABOVE GRADE	(FT):						
approx 30 feet							
43) GOOD ENGINEERING PRACTICE (GE	P) HEIGHT, IF KNO	OWN (FT):					
Unknown							
44) DIAMETER OF EXHAUST POINT (FT) 1.128 TIMES THE SQUARE ROOT OF		ON CIRCULAR EXHAL inches	IST POINT, THE DIAMETER IS				
45) EXIT GAS FLOW RATE	a) MAXIMUM (AC	FM):	b) TYPICAL (ACFM):				
	15	5,500	15,500				
46) EXIT GAS TEMPERATURE	a) MAXIMUM (°F)		b) TYPICAL ("F):				
	арр	rox 75	approx 75				
47) DIRECTION OF EXHAUST (VERTICAL	, LATERAL, DOWN	(WARD):					
Vertical							
48) LIST ALL EMISSION UNITS AND COM	TROL DEVICES SI	RVED BY THIS EXH	AUST POINT:				
NAME		FLO	W DIAGRAM DESIGNATION				
a) Aeration Rooms (current)		AR					
b) Sterilizer Backvent SC1, SC2	, SC3, SC4	Backvent					
c) Backup for Sterlizer Chamber	s SC1-4	vacuum pur	mp				
d)							
e)							
THE FOLLOWING INFORMATION NEED ONLY	BE SUPPLIED IF REA	b) LONGITUDE:					
49a) LATITUDE:		0,0000000000000000000000000000000000000					
50) UTM ZONE:	b) UTM VERTICA	L (KM):	c) UTM HORIZONTAL (KM):				



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL — PERMIT SECTION P.O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

FOR A	APPLICANT'	SUSE
Revision #	t:	
Date:	/	- /
Page	of	
Source De	signation:	

	FOR AGENCY USE ONLY
5500500 5111001011111	ID NUMBER:
PROCESS EMISSION UNIT	ENERGY PARTY
DATA AND INFORMATION	EMISSION POINT #:
	DÂTE;
SOURCE IN	IFORMATION
1) SOURCE NAME:	
Sterigenics US, LLC	
2) DATE FORM PREPARED: 30 May 2018	3) SOURCE ID NO. (IF KNOWN): 043110AAC
GENERAL II	NFORMATION
NAME OF EMISSION UNIT: (6) Ethylene Oxide/Propylene oxide Sterilization	Chambers (13 pallet capacity) SC-2
5) NAME OF PROCESS:	
Sterilization of medical products and spices	
6) DESCRIPTION OF PROCESS:	
Chemical Sterilization	
7) DESCRIPTION OF ITEM OR MATERIAL PRODUCED OR A	CTIVITY ACCOMPLISHED:
Sterilized Medical Supplies and Treated Spices	
8) FLOW DIAGRAM DESIGNATION OF EMISSION UNIT:	
Sterilizer Chambers	
9) MANUFACTURER OF EMISSION UNIT (IF KNOWN):	
Unknown	
10) MODEL NUMBER (IF KNOWN):	11) SERIAL NUMBER (IF KNOWN):
unknown	unknown
12) DATES OF COMMENCING CONSTRUCTION, OPERATION AND/OR MOST RECENT MODIFICATION	a) CONSTRUCTION (MONTH/YEAR):
OF THIS EMISSION UNIT (ACTUAL OR PLANNED)	June 1984
	b) OPERATION (MONTH/YEAR):
	May 1985
	c) LATEST MODIFICATION (MONTH/YEAR):
	November 1990
13) DESCRIPTION OF MODIFICATION (IF APPLICABLE):	
The sterilization chambers includes the chamber ve	ent (via vacuum pump) and the chamber exhaust
vent (backvent) as one emission unit. The chambe	the backyoot with comblet #2 and the
autosphere. This modification proposes to control	the backvent with scrubber #2 and dry bed reactor.

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPLICATION PAGE 26

FOR APPLICANT'S USE

14) DOES THE EMISSION UNIT HAV	E MOI	RE THAN ONE	MODE	OF O	PERATION	!?		YES		O NO	
IF YES, EXPLAIN AND IDENTIFY A SEPARATE PROCESS EMISSI FOR EACH MODE):	ON UN	NIT FORM 220	-CAAP	P MUS	T BE COM	PLETEI)				
The sterilization chambers incli	udes	the chambe	r vent	(via v	acuum p	ump) a	and the	chamb	er ex	chaust	
vent (backvent) as one emission	n uni	t. The chan	nber b	ackve	ent modifi	cation	is cove	red by t	this 1	orm. The	
chamber vent is controlled by \	NB1 /	Acid Scrubb	er 1 a	nd re	mains un	chang	ed.				
15) PROVIDE THE NAME AND DESI EMISSION UNIT, IF APPLICABLE MUST BE COMPLETED FOR EA	(FOR	M 260-CAAPF M OF AIR PO	P AND 1 LLUTIO	THE AF	PROPRIA NTROL EQ	TE 260- UIPMEI	CAAPP A NT):	DDENDU	JM F	ORM	
The chamber backvent is curre	ently u	incontrolled	, This	appli	cation pr	opose	s to duc	t the ch	amb	ier	
exhaust vent (backvent) to the	existi	ng Acid Scr	ubber	(scru	bber #2)	with D	ry Bed	Reactor	r. Th	е	
information provided below is r											
16) WILL EMISSIONS DURING STAF RATE PURSUANT TO A SPECIF ESTABLISHED BY AN EXISTING	IC RUI	LE, OR THE A	LLOWA	\BLE E	MISSION L	MISSIO IMIT A	N (YES		⊗ _{NO}	
IF YES, COMPLETE AND ATTAC EXCESS EMISSIONS DURING S	TART	UP OF EQUIP	MENT								
17) PROVIDE ANY LIMITATIONS ON STANDARDS (E.G., ONLY ONE	UNIT I	S OPERATED	AT A T	IME):							
Monthly usage limitations for p	ropyle	ene oxide a	nd eth	ylene		all not	exceed	2800 p	oun	ds and	
70,000 pounds respectively for	all e	mission unit	s in W	/illowl	prook I.						
		 .		_							
		OPERATI	NG IN	IFOR	MATION						
OPERATING INFORMATION 18) ATTACH THE CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSION RELATED, FROM WHICH THE FOLLOWING OPERATING INFORMATION, MATERIAL USAGE INFORMATION AND FUEL USAGE DATA WERE BASED AND LABEL AS EXHIBIT 220-1. REFER TO SPECIAL NOTES OF FORM 202-CAAPP.											
19a) MAXIMUM OPERATING HOUR	S	HOURS/DAY	DAYS/WEEK: WEEKS/YEAR:								
8760 per year		24	7.6			7			52		
b) TYPICAL OPERATING HOURS		HOURS/DAY	Υ-		DAYS/WI	ĒK:		WEEKS/YEAR:			
8600 per year	·		24			7		52			
20) ANNUAL THROUGHPUT		DEC-FEB(%	3:	MAR			JUN-AUG(%):		SEP-NOV(%):		
20) ANNOAL TIMOGOTII OT		25	'''' ''	25	25 25						
		l									
	M	ATERIAL U	JSAGI	E INF	ORMATI	ON					
		MAXIMU	JM RAT	ES			Т	YPICAL F	RATE	S	
21a) RAW MATERIALS	Ī	BS/HR	<u> </u>	TONS/	YEAR		LBS/HR		Т	ONS/YEAR	
Ethylene Oxide					420						
Propylene oxide					17						
		· · · · · · · · · · · · · · · · · · ·									

		MAXIN	MUM F	RATES		TYPICAL	RATES			
21b) PRODUCTS		LBS/HR	\prod	TONS/YEAR	LBS/I	HR	TONS/YEAR			
N/A			1 [
	1		1							
	\vdash		1			—				
	+		┨┟							
	 		┧┟							
	—		4 }							
			Ш							
		_								
		MAXIM	/UM P	RATES		TYPICAL	RATES			
21c) BY-PRODUCT MATERIALS		LBS/HR	\prod	TONS/YEAR	LBS/F	IR	TONS/YEAR			
N/A			1 [
			1 [
			1							
			┧┝							
	 		┤├							
			-							
	_	FUE	I. US	SAGE DATA						
22a) MAXIMUM FIRING RATE (MILLION BTU/HR):		b) TYPICAL	. FIRIN	NG RATE	c) DESIGN	N CAPACITY	Y FIRING			
(MILLION BTU/HR):		(MILLION	N BTU/ N//	•	RATE (MILLION BTU/HR): N/A					
			130	Α						
d) FUEL TYPE:										
ONATURAL GAS OFUE										
IF MORE THAN ONE FUEL IS U										
e) TYPICAL HEAT CONTENT OF I	FUEL ((BTU/LB,		f) TYPICAL SULI	FUR CONTEN	T (WT %., N	NA FOR NATURAL			
BTU/GAL OR BTU/SCF):				GAS):		030				
g) TYPICAL ASH CONTENT (WT GAS):	%., NA	A FOR NATU	RAL	h) ANNUAL FUE	EL USAGE (SP BAL/YEAR, TO	ECIFY UNI	TS, E.G.,			
GROJ.				SUFFERING	ALIYEAR, IO.	N/YEAR)				
23) ARE COMBUSTION EMISSIONS? PROCESS UNIT EMISSIONS?	S DUC	TED TO THE	SAM	E STACK OR CONT	ROL AS		res O NO			
IF NO, IDENTIFY THE EXHAUS	IO9 Ti	NT FOR COM	/BUST	TION EMISSIONS:						

	204(j)(4), 3.5 LBS/GAL):	. mat.													7					
	ABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218, REQUIREMENT(S)	At least 85% recovery of total uncontrolled org. mat.	99% reduction or 1 ppm outlet	REQUIREMENT(S)	MACT recordkeeping and reporting			REQUIREMENT(S)	MACT recordkeeping and reporting			REQUIREMENT(S)	Weekly Scrubber liquor level	Weekly EO concentration from dry beds		22	REQUIREMENT(S)	Testing of control equipment		
RULES	H ARE APPLICA	Ā	6	SION UNIT:	\[\bar{\chi}{\chi}\]		JNIT		Σ		UNIT:	[5	>		TO THIS EMISSI				
APPLICABLE RULES	(S) AND LIMITATION(S) SET BY RULE(S) WHICH EMISSION STANDARD(S)	35 IAC 218.302(b)	40CFR 63.362	LE(S) WHICH ARE APPLICABLE TO THIS EMISS	40 CFR 63.10		WHICH ARE APPLICABLE TO THIS EMISSION UNIT	REPORTING RULE(S)	40 CFR 63.10		WHICH ARE APPLICABLE TO THIS EMISSION	MONITORING RULE(S)	40CFR 63.364	40CFR 63.364		RES V	TESTING RULE(S)	40 CFR63.365		
	24) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITATION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218,204(j)(4), 3.5 LBS/GAL): REGULATED AIR POLLUTANT(S)	VOM (WB1 Scrubber 2)	HAP (WB1 Scrubber 2)	25) PROVIDE ANY SPECIFIC RECORDKEEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:	Standards don't apply to backvent	but do apply to WB1 Scrubber 2	26) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE AP	REGULATED AIR POLLUTANT(S)	Standards don't apply to backvent	but do apply to WB1 Scrubber 2	27) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT	REGULATED AIR POLLUTANT(S)	HAP monitoring applies to	WB1 Scrubber 2 and dry beds		28) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDU	REGULATED AIR POLLUTANT(S)	HAP applies to WB1 Scrubber 2		

29) DOES THE EMISSION I OTHERWISE APPLICAL	UNIT QUALIFY FOR AN EXEM BLE RULE?	MPTION FROM AN	YES	⊗ NO
EXEMPTION, PROVIDE SUPPORTING DATA AN	TH THE RULE FROM WHICH E A DETAILED EXPLANATION ND CALCULATIONS. ATTAC CH ADDRESS AND JUSTIFY	N JUSTIFYING THE EXEMPT H AND LABEL AS EXHIBIT 2	TION. INCLUDE DETA	M ED
	COMPLIAI	NCE INFORMATION		
30) IS THE EMISSION UNIT REQUIREMENTS?	IN COMPLIANCE WITH ALL	APPLICABLE		O NO
IF NO, THEN FORM 294 COMPLYING EMISSION	I-CAAPP "COMPLIANCE PLA I UNITS" MUST BE COMPLE"	N/SCHEDULE OF COMPLIA TED AND SUBMITTED WITH	NCE ADDENDUM F THIS APPLICATION.	OR NON
31) EXPLANATION OF HOV	VINITIAL COMPLIANCE IS T	O BE, OR WAS PREVIOUSL	Y, DEMONSTRATED:	
Ethylene Oxide and P	ropylene oxide usage is			
WB Scrubber 2 was te	ested January 23, 2003			
32) EXPLANATION OF HOW	V ONGOING COMPLIANCE W	/ILL BE DEMONSTRATED:		
Records of Ethylene O	xide (EO) and Propylene	e Oxide (PO) usage, (me	onthly)	
	uired to monitor scrubbe			
	ecked weekly to determi			
20 concentration is en	ecked weekly to determine	tie brobei oberation or t	the Dry Bed Offit.	
TEST	TING, MONITORING, RI	ECORDKEEPING AND	REPORTING	
	S THAT RELATE TO AIR EM			INTAINED TO
DETERMINE FEES, RU	ILE APPLICABILITY OR COM	PLIANCE. INCLUDE THE U	NIT OF MEASUREME	NT. THE
METHOD OF MEASURI	EMENT, AND THE FREQUEN	ICY OF SUCH RECORDS (E	.G., HOURLY, DAILY,	WEEKLY):
				100
PARAMETER	UNIT OF MEASUREMENT	METHOD OF MEASUREN	MENT FRE	DUENCY
Sterilant Usage	pounds	Operating data	monthly	
Liquor level	inches	Operating data	weekly	
EO conc	ppm	GLC from dry bed	weekly	
	Palatti	OLO HOITI GIY DEG	WEEKIY	
				

33b) BRIEFLY DESCRIBE THE METHOD BY WHICH RECORDS WILL BE CREATED AND MAINTAINED. FOR EACH RECORDED PARAMETER INCLUDE THE METHOD OF RECORDKEEPING, TITLE OF PERSON RESPONSIBLE FOR RECORDKEEPING, AND TITLE OF PERSON TO CONTACT FOR REVIEW OF RECORDS:									
PA	RAMETER	METHOD OF RECORDKEEPING		TITLE OF PERSON RESPONSIBLE		TITLE CONTACT I			
	ilant usage	Operating report		General Manager		EH&S			
Liqu	or Level	PM records		General Manager		EH&S			
EO	conc	PM Records		General Manager		EH&S			
	-								
6) IS CO!	ADITANCE OF THE	EMISSION LINIT READILY	nei	MONSTRATED BY REVIEW OF		\bigcirc			
c) IS COMPLIANCE OF THE EMISSION UNIT READILY DEMONSTRATED BY REVIEW OF YES NO THE RECORDS?									
IF NO,	EXPLAIN:								
4) ARE A	I PECÓPIS DEA	DILY AVAILABLE FOR INSE	FC	TION COPYING AND		<u> </u>			
d) ARE ALL RECORDS READILY AVAILABLE FOR INSPECTION, COPYING AND SUBMITTAL TO THE AGENCY UPON REQUEST? NO									
IF NO, EXPLAIN:									
24-) DESCRIPE ANY MONITORS OF MONITORING ACTIVITIES USED TO DETERMINE FEES RULE APPLICABILITY OR									
34a) DESCRIBE ANY MONITORS OR MONITORING ACTIVITIES USED TO DETERMINE FEES, RULE APPLICABILITY OR COMPLIANCE:									
Monitor and record the level of the scrubber liquor in recirculation tank. Monitor the EtO concentration entering and exiting the AATDry Beds.									
Monitor:1	ne EtO concent	ration entering and exit	ımg	the AATDry Beus.					
b) WHAT	PARAMETER(S) IS	S(ARE) BEING MONITORED) (E	.G., VOM EMISSIONS TO ATMO	SPI	HERE)?			
	scrubber liquor.								
EtO leve	Is from the AAT	Dry Beds.							
c) DESCI	RIBE THE LOCATION	ON OF EACH MONITOR (E.	G., I	N STACK MONITOR 3 FEET FR	OM	EXIT):			

34d) IS EACH MONITOR EQUIPPED V	WITH A RECORDING DEVICE	?		O yes	(X) NO			
IF NO, LIST ALL MONITORS WITHO	OUT A RECORDING DEVICE:) iE3	C NO			
N/A								
e) IS EACH MONITOR REVIEWED FOR BASIS?	R ACCURACY ON AT LEAST	A QUARTERL	.Y	YES	O NO			
IF NO, EXPLAIN:								
N/A								
f) IS EACH MONITOR OPERATED AT IN OPERATION?	ALL TIMES THE ASSOCIATE	D EMISSION	UNIT IS	YES	× NO			
IF NO, EXPLAIN:								
No continuous monitoring is required.								
35) PROVIDE INFORMATION ON THE M PURPOSES OF THE DETERMINATION	ON OF FEES BUILE APPLICA	Y, IN WHICH	THE RESU	LTS ARE USED	FOR			
DATE, TEST METHOD USED, TEST	ING COMPANY, OPERATING	CONDITIONS	SEXISTING	3 DURING THE 1	E TEST TEST AND A			
SUMMARY OF RESULTS. IF ADDIT	IONAL SPACE IS NEEDED, A			EXHIBIT 220-4:				
TEST DATE TEST METHOD	TESTING COMPANY	OPERA1 CONDITI		SUMMARY OF	RESULTS			
1/21/03	Kremer Env.	Normal		> 99% effici	encv			
					,			
36) DESCRIBE ALL REPORTING REQUI	DEMENTS AND DOOVIDE TH	E TITLE AND	EDEOUE	ICY OF BEDOD	P			
SUBMITTALS TO THE AGENCY:	KLIMENTS AND PROVIDE TH	IE TITLE AND	FREQUE	NOT OF REPORT				
REPORTING REQUIREMENTS	TITLE OF REPORT	•		FREQUENCY				
Annual emissions report	Annual emissions re	port	annua	(per CAAPP)				
Excess emissions	Excess emissions		semi-a	nnual				
			<u> </u>					

					(37)E	MISSION	(37) EMISSION INFORMATION				
			1 ACTUAL EMISSION RATE UNCONTROLLED EMISSIC	<u> </u>	RATE		ALLOWABLE	ALLOWABLE BY RULE EMISSION RATE	ON RATE	PERMITTED EMISSION RATE	SION RATE
REGULATED AIR POLLUTANT		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	³ OTHER TERMS	3OTHER TERMS	4рм	⁵ RATE (UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON	MAXIMUM:					10.5	J	î			
MONOXIDE (CO)	TYPICAL:						J				
LEAD	MAXIMUM:				a 6		~				
	TYPICAL						J				
NITROGEN	MAXIMUM:						<u> </u>				
OXIDES (NOx)	TYPICAL:						J				
PARTICULATE	MAXIMUM:						_				
MATTER (PART)	TYPICAL:						J	,			
PARTICULATE MATTER <= 10	MAXIMUM:						`				
MICROMETERS (PM10)	TYPICAL:						J				
SULFUR	MAXGMUM:					56	J				
DIOXIDE (SO2)	TYPICAL:						J	^			
VOLATILE ORGANIC	MAXIMUM:						Ú	^			
MATERIAL (VOM)	TYPICAL:						J	î			
OTHER, SPECIFY:	MAXIMUM:	See Ex.	220-A&B				J				
	TYPICAL:										
EXAMPLE: PARTICULATE	махамим:	5.00	21.9	0.3 GR/DSCF		+	6.0 (LBS/HR)	212.321	26.28	5.5 LBS/HR	22
MATTER	TYPICAL	4.00	14.4	0.24 GR/DSCF		4	5.5 (LBS/HR)	212.321	19.80		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-5.

1CHECK UNCONTROLLED EMISSION RATE BOX IF CONTROL EQUIPMENT IS USED, OTHERWISE CHECK AND PROVIDE THE ACTUAL EMISSION RATE TO ATMOSPHERE, INCLUDING INDOORS. SEE INSTRUCTIONS.
2 PROVIDE THE EMISSION RATE THAT WALL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.
3 PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G. PPM, GR/DSCF, ETC.)
4 DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP 42 OR AIRS), 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP 42 OR AIRS)
5 RATE - ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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MAME OF HAP 2-OLS 2-OLS 2-OLS MAME OF HAP 2-OLS 2-			3	(38) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION	AIR POLLUTAN	IT EMISSION IN	IFORMATIO	N.	
P				O 1ACTU	AL EMISSION RA NTROLLED EMIS	TE SION RATE		:	ULE
75-21-8 MAXIMUM See Exhibit 220-A&B Princyl 75-56-9 MAXIMUM See Exhibit 220-A&B Princyl MAXIMUM TYPICAL MAXIMUM Princyl MAXIMUM TYPICAL Princyl Princyl MAXIMUM TYPICAL Princyl <td>NAME OF HAP EMITTED</td> <td>2cas NUMBER</td> <td></td> <td>POUNDS PER HOUR (LBS/HR)</td> <td>TONS PER YEAR (TONS/YR)</td> <td>30THER TERMS</td> <td>4DM</td> <td>⁵RATE OR STANDARD</td> <td>APPLICABLE</td>	NAME OF HAP EMITTED	2cas NUMBER		POUNDS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	30THER TERMS	4DM	⁵ RATE OR STANDARD	APPLICABLE
75-56-9 WAXIMUM See Exhibit 220-A&B		75-21-8	MAXIMUM	See Exhibit	220-A&B				
75-56-9 MAXIMUM See Exhibit 220-A&B			TYPICAL						
TYPICAL MAXIMUM. TYPICAL TY		75-56-9	MAXIMUM	See Exhibit	220-A&B				
TYPICAL MAXIMUM TYPICAL TYPI			TYPICAL:						
TYPICAL WAXIMUM			MAXIMUM						
TYPICAL MAXIMUM: TYPICAL S			TYPICAL		:				
TYPICAL MAXIMUM. TYPICAL S.0 0.8 2 leak-light trucks			MAXIMUM:						
TYPICAL MAXIMUM. TYPICAL MAXIMUM. TYPICAL MAXIMUM. TYPICAL MAXIMUM. 10.0 1.2 98% by wt control device 1			TYPICAL						
TYPICAL MAXIMUM TYPICAL MAXIMUM 10.0 1.2 10.8 10.0 1.2 10.0 1			MAXIMUM:						
TYPICAL			TYPICAL						
TYPICAL MAXIMUM. 10.0 1.2 168k-bj wt control device 1432 17PICAL 16.0 1.2 2 168k-bj wt control device 158k by wt contr			MAXIMUM						
TYPICAL		•	TYPICAL:						
TYPICAL			MAXIMUM						
MAXIMUM: 10.0 1.2 98% by wt control device 1432 17PICAL: 8.0 0.8 2 188% by wt control device			TYPICAL						
TYPICAL: 8.0 0.8 2 (98% by wt control device leak-tight trucks			MAXIMUM:						
MAXIMUM. 10.0 1.2 2 98% by wt control device 71432 TYPICAL: 8.0 0.8 2 leak-tight trucks			TYPICAL						
71432 TYPICAL 8.0 0.8 2 teak-tight trucks	EXAMPLE:		MAXIMUM:	10.0	1.2		2	98% by wt control device	CFR 61
	Benzene	71432	TYPICAL	8.0	0.8		2	leak-tight trucks	61.302(b),(d)

¹PROVIDE UNCONTROLLED EMISSIONS IF CONTROL EQUIPMENT IS USED. OTHERWISE, PROVIDE ACTUAL EMISSIONS TO THE ATMOSPHERE, INCLUDING INDOORS. CHECK BOX TO SPECIFY.

2CAS - CHEMICAL ABSTRACT SERVICE NUMBER.

³PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED. REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GR/DSCF, ETC.).

⁴DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP-42 OR AIRS, 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP-42 OR AIRS).

⁵RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

(J) Printed on Recycled Paper 220-CAAPP APPLICATION PAGE

		T INFORMATION			
THIS SECTION SHOULD NOT BE COMPLETED		XHAUSTED THROUGH A	IR POLLUTION CONTROL EQUIPMENT.		
39) FLOW DIAGRAM DESIGNATION OF E	XHAUST POINT:				
WB1 Scrubber #2 with dry bed					
40) DESCRIPTION OF EXHAUST POINT (DISCHARGES INDOORS, DO NOT CO	STACK, VENT, ROOMPLETE THE REM	OF MONITOR, INDOC MAINING ITEMS.	RS, ETC.). IF THE EXHAUST POINT		
Outside Stack					
41) DISTANCE TO NEAREST PLANT BOU	INDARY FROM EXI	HAUST POINT DISCH	ARGE (FT):		
approx 20 feet					
42) DISCHARGE HEIGHT ABOVE GRADE	(FT):				
approx 30 feet					
43) GOOD ENGINEERING PRACTICE (GI	EP) HEIGHT, IF KNO	OWN (FT):			
Unknown					
44) DIAMETER OF EXHAUST POINT (FT): NOTE: FOR A NON CIRCULAR EXHAUST POINT, THE DIAMETER IS 1.128 TIMES THE SQUARE ROOT OF THE AREA. 24 inches					
45) EXIT GAS FLOW RATE	a) MAXIMUM (ACI	-M):	b) TYPICAL (ACFM):		
	15,500		15,500		
46) EXIT GAS TEMPERATURE	a) MAXIMUM (°F):		b) TYPICAL (*F):		
	арр	rox 75	арргох 75		
47) DIRECTION OF EXHAUST (VERTICAL	L, LATERAL, DOWN	WARD):			
Vertical					
48) LIST ALL EMISSION UNITS AND COM	ITROL DEVICES SI	RVED BY THIS EXH.	AUST POINT:		
NAME		FLC	W DIAGRAM DESIGNATION		
Aeration Rooms (current)		AR			
b) Sterilizer Backvent SC1, SC2					
c) Backup for Sterlizer Chamber	s SC1-4	vacuum pump			
d)					
e)					
THE FOLLOWING INFORMATION NEED ONLY 49a) LATITUDE:	BE SUPPLIED IF REA	DILY AVAILABLE. b) LONGITUDE:			
Transport (1777 Star Street)		,			
50) UTM ZONE:	b) UTM VERTICA	L (KM):	c) UTM HORIZONTAL (KM):		



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL + PERMIT SECTION P.O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

FOR AP	PLIC	ANT'	S USE					
Revision #:								
Date:	_/_		. /					
Page		of						
Source Desi	Source Designation:							

PROCESS EMISSION UNIT DATA AND INFORMATION

FOR AGENCY USE ONLY
ID NUMBER:
EMISSION POINT #:
DATE:

SOURCE IN	FORMATION
1) SOURCE NAME:	
Sterigenics US, LLC	
2) DATE FORM PREPARED: 30 May 2018	3) SOURCE ID NO. (IF KNOWN): 043110AAC

GENERAL INFORMATION				
4) NAME OF EMISSION UNIT: (1) Ethylene Oxide/Propylene oxide Sterilization Chambers (3 pallet capacity) SC-3				
5) NAME OF PROCESS:				
Sterilization of medical products and spices				
6) DESCRIPTION OF PROCESS:				
Chemical Sterilization				
7) DESCRIPTION OF ITEM OR MATERIAL PRODUCED OR ACTIVITY ACCOMPLISHED:				
Sterilized Medical Supplies and Treated Spices				
8) FLOW DIAGRAM DESIGNATION OF EMISSION UNIT:				
Sterilizer Chambers				
9) MANUFACTURER OF EMISSION UNIT (IF KNOWN):				
Unknown				
10) MODEL NUMBER (IF KNOWN):	11) SERIAL NUMBER (IF KNOWN):			
unknown	unknown			
12) DATES OF COMMENCING CONSTRUCTION,	a) CONSTRUCTION (MONTH/YEAR):			
OPERATION AND/OR MOST RECENT MODIFICATION OF THIS EMISSION UNIT (ACTUAL OR PLANNED)	June 1984			
, i	b) OPERATION (MONTH/YEAR):			
	May 1985			
	c) LATEST MODIFICATION (MONTH/YEAR):			
	November 1990			
13) DESCRIPTION OF MODIFICATION (IF APPLICABLE):				

The sterilization chambers includes the chamber vent (via vacuum pump) and the chamber exhaust vent (backvent) as one emission unit. The chamber exhaust vent currently exhausts uncontrolled to atmosphere. This modification proposes to control the backvent with scrubber #2 and dry bed reactor.

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPLICATION PAGE 36

FOR APPLICANT'S USE

14) DOES THE EMISSION UNIT HAV	/E MO	RE THAN ONE N	ODE OF C	PERATION?	-	X YES	O NO	
IF YES, EXPLAIN AND IDENTIFY A SEPARATE PROCESS EMISS FOR EACH MODE):								
The sterilization chambers incl								
vent (backvent) as one emission	on uni	it. The chamb	er backv	ent modifica	ation is cove	ered by	this form. The	
chamber vent is controlled by	WB1	Acid Scrubber	1 and re	mains unch	anged.			
15) PROVIDE THE NAME AND DESI EMISSION UNIT, IF APPLICABLE MUST BE COMPLETED FOR EA	E (FOF	RM 260-CAAPP A	ND THE A	PPROPRIATE	260-CAAPP A	CONTRO	LLING THIS UM FORM	
The chamber backvent is curre								
exhaust vent (backvent) to the	exist	ing Acid Scrub	ber (scru	ibber #2) w	th Dry Bed	Reacto	r. The	
information provided below is a	requir	ed for the exis	ting cont	rol device.				
16) WILL EMISSIONS DURING STAI RATE PURSUANT TO A SPECIF ESTABLISHED BY AN EXISTING	IC RU	LE, OR THE ALL	OWABLE E	MISSION LIM		YES	⊠ NO	
IF YES, COMPLETE AND ATTAC EXCESS EMISSIONS DURING S				TO OPERAT	E WITH			
17) PROVIDE ANY LIMITATIONS ON SOURCE OPERATION AFFECTING EMISSIONS OR ANY WORK PRACTICE STANDARDS (E.G., ONLY ONE UNIT IS OPERATED AT A TIME):								
STANDARDS (E.G., ONLY ONE UNIT IS OPERATED AT A TIME): Monthly usage limitations for propylene oxide and ethylene oxide shall not exceed 2800 pounds and								
70,000 pounds respectively for all emission units in Willowbrook I.								
OPERATING INFORMATION								
18) ATTACH THE CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSION RELATED, FROM WHICH THE FOLLOWING OPERATING INFORMATION, MATERIAL USAGE INFORMATION AND FUEL USAGE DATA WERE BASED AND LABEL AS EXHIBIT 220-1. REFER TO SPECIAL NOTES OF FORM 202-CAAPP.								
19a) MAXIMUM OPERATING HOUR	S	HOURS/DAY:		DAYS/WEE	<u>C</u> :	WEEKS	/YEAR	
8760 per year		24		7			52	
b) TYPICAL OPERATING HOURS	,	HOURS/DAY:		DAYS/WEEK:			S/YEAR:	
,	1	24		7		WEEKS		
8600 per year		24					52	
20) ANNUAL THROUGHPUT			1 444	0.1.01.4/0/1	L M 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	13	52	
		DEC-FEB(%):	MAR	-MAY(%):	JUN-AUG(%	6):	SEP-NOV(%):	
		DEC-FEB(%): 25	MAR	-MAY(%): 25	JUN-AUG(% 25	o):		
		25		25	25	6):	SEP-NOV(%):	
	М			25	25	6):	SEP-NOV(%):	
	М	25 ATERIAL US	AGE INF	25	25		SEP-NOV(%): 25	
	M	25	AGE INF	25	25	YPICAL F	SEP-NOV(%): 25	
21a) RAW MATERIALS		25 ATERIAL US	AGE INF	25 ORMATION	25		SEP-NOV(%): 25	
21a) RAW MATERIALS Ethylene Oxide		ATERIAL US	AGE INF	25 ORMATION	25 /		SEP-NOV(%): 25 RATES	
		ATERIAL US	AGE INF	25 ORMATION YEAR	25 /		SEP-NOV(%): 25 RATES	
Ethylene Oxide		ATERIAL US	AGE INF	ORMATION YEAR 420	25 /		SEP-NOV(%): 25 RATES	
Ethylene Oxide		ATERIAL US	AGE INF	ORMATION YEAR 420	25 /		SEP-NOV(%): 25 RATES	
Ethylene Oxide		ATERIAL US	AGE INF	ORMATION YEAR 420	25 /		SEP-NOV(%): 25 RATES	

				<u> </u>				
	MAXIM	UM R	ATES	TYPIC	AL RATES			
	LBS/HR	П	TONS/YEAR	LBS/HR	TONS/YEAR			
		-	-					
-		-						
-		-						
		, -						
_		ŀ						
	MAXIMU	JM R	ATES	TYPIC	AL RATES			
_	LBS/HR		TONS/YEAR	LBS/HR	TONS/YEAR			
		L						
		F						
		-						
				c) DESIGN CAPAC				
		N//	I/A N/A					
	l							
EL OII	CPADE NUM	40ED		OAL OTHER				
	(0.0,20,		GAS):	ON CONTENT (WY %	, NATOR NATORAL			
%., N	IÄ FOR NATUR	≀AL						
g) TYPICAL ASH CONTENT (WT %., NA FOR NATURAL h) ANNUAL FUEL USAGE (SPECIFY UNITS, E.G., SCF/YEAR, GAL/YEAR, TON/YEAR):								
	CTED TO THE	SAM	E STACK OR CONT	ROL AS	YES NO			
S DU			E STACK OR CONT	ROL AS	YES NO			
S DU				ROL AS	YES NO			
S DU				ROL AS	YES NO			
	EL OIL JSED FUEL	LBS/HR MAXIMU LBS/HR FUEL b) TYPICAL F (MILLION EL OIL: GRADE NUM JSED, ATTACH AN E	MAXIMUM R LBS/HR LBS/HR LBS/HR LBS/HR FUEL US (MILLION BTU/ N// EL OIL: GRADE NUMBER JSED, ATTACH AN EXPL	MAXIMUM RATES LBS/HR TONS/YEAR FUEL USAGE DATA b) TYPICAL FIRING RATE (MILLION BTU/HR): N/A EL OIL: GRADE NUMBER C. JSED, ATTACH AN EXPLANATION AND LAB FUEL (BTU/LB,	TONS/YEAR LBS/HR MAXIMUM RATES TYPICAL LBS/HR TONS/YEAR LBS/HR LBS/HR LBS/HR LBS/HR C) DESIGN CAPAC RATE (MILLION BTU/HR): N/A COAL OTHER JSED, ATTACH AN EXPLANATION AND LABEL AS EXHIBIT 220-2 FUEL (BTU/LB, 1) TYPICAL SULFUR CONTENT (WT % GAS):			

	<u> </u>								
29) DOES THE EMISSION UNIT QUALIFY FO OTHERWISE APPLICABLE RULE?	OR AN EXEMPTION FROM AN	OY	ES 2	ON (S					
IF YES, THEN LIST BOTH THE RULE FR EXEMPTION. PROVIDE A DETAILED EX SUPPORTING DATA AND CALCULATION ATTACHMENT(S) WHICH ADDRESS AND	PLANATION JUSTIFYING THE E IS. ATTACH AND LABEL AS EX	XEMPTION, INCLUDI	E DETAILED) ER					
		45,3H E - T	0	57001/-					
C	OMPLIANCE INFORMATION	ON							
30) IS THE EMISSION UNIT IN COMPLIANCE		6.0							
REQUIREMENTS?	WITH ALL AFFLIOABLE	⊠ _Y	ES L) NO					
IF NO, THEN FORM 294-CAAPP "COMPL COMPLYING EMISSION UNITS" MUST B	IANCE PLAN/SCHEDULE OF CO E COMPLETED AND SUBMITTER	MPLIANCE ADDENI D WITH THIS APPLICA	DUM FOR N ATION.	ION					
31) EXPLANATION OF HOW INITIAL COMPL	IANCE IS TO BE, OR WAS PREV	IOUSLY, DEMONSTR	ATED:						
Ethylene Oxide and Propylene oxide	usage is tracked monthly								
	•								
WB Scrubber 2 was tested January 2	23, 2003								
,									
22) EVELANATION OF HOW ONCOME COMPLIANCE IN A FEBRUARY FOR									
32) EXPLANATION OF HOW ONGOING COMPLIANCE WILL BE DEMONSTRATED:									
Records of Ethylene Oxide (EO) and Propylene Oxide (PO) usage. (monthly)									
WB1 Scrubber 2 is required to monito									
EO concentration is checked weekly	o determine proper operation	on of the Dry Bed I	Jnit.						
				- 1					
				- 1					
				- 1					
				- 1					
				i					
				- 1					
				- 1					
TESTING MOUTE	BING BEGGESTER	AND DEDOCTOR							
IESTING, MUNITU	RING, RECORDKEEPING	AND REPORTING	3						
33a) LIST THE PARAMETERS THAT RELATE	TO AIR EMISSIONS FOR WHICH	HRECORDS ARE BEI	NG MAINTA	INED TO					
DETERMINE FEES, RULE APPLICABILITY METHOD OF MEASUREMENT, AND THE	TOR COMPLIANCE. INCLUDE	THE UNIT OF MEASU	REMENT, T	HE					
METHOD OF MEADONEMENT, AND THE	TREGOLIGI OF SOCH RECOR	NDS (E.G., HOURLT, L	JAILT, WEE	KLT):					
PARAMETER UNIT OF MEAS	JREMENT METHOD OF MEA	ASUREMENT	FREQUEN	CY					
Sterilant Usage pounds	Operating da	ita I mo	nthly	7					
				!					
Liquor level inches	Operating da	ita we	ekly						
EO conc ppm	OLO francis ats		-t.t.	 					
EO conc ppm	GLC from dr	y bed we	ekly						
				1 1					

RECORDED PARAME	TER INCLUDE THE METHOD	CORDS WILL BE CREATED AND M OF RECORDKEEPING, TITLE OF ONTACT FOR REVIEW OF RECOR	PERSON RESPONSIBLE FOR						
PARAMETER	METHOD OF RECORDKEEPING	TITLE OF PERSON RESPONSIBLE	TITLE OF CONTACT PERSON						
Sterilant usage	Operating report	General Manager	EH&S						
Liquor Level	PM records	General Manager	EH&S						
EO conc	PM Records	General Manager	EH&S						
	E EMOCION UNIT DEADILY	DEMONSTRATED BY REVIEW OF	8						
THE RECORDS?	E EMISSION UNIT READILY	DEMONSTRATED BY REVIEW OF							
IF NO, EXPLAIN:									
N. 105 ALL DECCROS DE	ADILY AVAILABLE FOR INCE	PECTION CORVING AND	8						
d) ARE ALL RECORDS READILY AVAILABLE FOR INSPECTION, COPYING AND SUBMITTAL TO THE AGENCY UPON REQUEST?									
IF NO, EXPLAIN:									
		TO DETERMINE OF	EC DUIL E ADDI ICADUITY OD						
34a) DESCRIBÉ ANY MONI COMPLIANCE:	TORS OR MONITORING ACI	FIVITIES USED TO DETERMINE FE	ES, RULE APPLICABILITY OR						
	level of the scrubber liqu								
Monitor the EtO concer	ntration entering and exit	ling the AATDry Beas.							
b) WHAT PARAMETER(S)	IS(ARE) BEING MONITORED	(E.G., VOM EMISSIONS TO ATMO	SPHERE)?						
Level of scrubber liquo									
EtO levels from the AA	T Dry Beds.								
c) DESCRIBE THE LOCAT	TION OF EACH MONITOR (E.	G., IN STACK MONITOR 3 FEET FR	ROM EXIT):						
I .									

34d) IS EACH MONITOR EQUIPPE	WITH A RECORDING DEVICE?	O YES O NO
IF NO, LIST ALL MONITORS WITH	HOUT A RECORDING DEVICE:	U YES U NO
N/A		
e) IS EACH MONITOR REVIEWED F BASIS?	OR ACCURACY ON AT LEAST A QUAR	TERLY YES NO
IF NO, EXPLAIN:		
N/A		
f) IS EACH MONITOR OPERATED A IN OPERATION?	T ALL TIMES THE ASSOCIATED EMIS	SION UNIT IS YES NO
IF NO, EXPLAIN:		
No continuous monitoring is rec	auired.	
-		
35) PROVIDE INFORMATION ON THE	MOST RECENT TESTS, IF ANY, IN WI	ICH THE RESULTS ARE USED FOR
DATE, TEST METHOD USED, TES	STING COMPANY, OPERATING CONDI	OR COMPLIANCE. INCLUDE THE TEST TIONS EXISTING DURING THE TEST AND A
SUMMARY OF RESULTS. IF ADD	ITIONAL SPACE IS NEEDED, ATTACH	AND LABEL AS EXHIBIT 220-4;
TEST DATE TEST METHOD		PERATING SUMMARY OF RESULTS
1/21/03		mal > 99% efficiency
		- Solve Sittle Gridge
261 DESCRIBE ALL REPORTING REGI	MOCKENTO AND DOOMED THE TITLE	
36) DESCRIBE ALL REPORTING REQUESTIONS AND SUBMITTALS TO THE AGENCY:	DIKEMENTS AND PROVIDE THE TITLE	AND FREQUENCY OF REPORT
REPORTING REQUIREMENTS	TITLE OF REPORT	FREQUENCY
Annual emissions report	Annual emissions report	annual
Excess emissions	Excess emissions	semi-annual
	,	

					(37) E	MISSION	(37)EMISSION INFORMATION				
			1 ACTUAL EMISSION RATE 1 UNCONTROLLED EMISSK	1 1ACTUAL EMISSION RATE 1 1UNCONTROLLED EMISSION RATE			ALLOWABLE B	ALLOWABLE BY RULE EMISSION RATE	N RATE	² PERMITTED EMISSION RATE	SION RATE
REGULATED AIR POLLUTANT		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	3OTHER TERMS	³ OTHER TERMS	4DM	⁵ RATE (UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON	MAXIMUM:)				
MONOXIDE (CO)	TYPICAL										
LEAD	махимим:						Ĵ				
	TYPICAL:						^ _				
NITROGEN	MAXIMUM:										
OXIDES (NOx)	TYPICAL:						`				
PARTICULATE	MAXIMUM:						Ĵ				
MATTER (PART)	TYPICAL						Ĵ				
PARTICULATE MATTER <= 10	MAXIMUM:						<u> </u>				
MICROMETERS (PM10)	TYPICAL:										
SULFUR	MAXIMUM:										
DIOXIDE (SO2)	TYPICAL										
VOLATILE	MAXIMUM:										
MATERIAL (VOM)	TYPICAL)				
OTHER, SPECIFY:	MAXIMUM:	See Ex.	220-a								
	TYPICAL										
EXAMPLE: PARTICULATE	MAXIMUM:	5.00	21.9	0.3 GRØSCF		4	6.0 (LBS/HR)	212.321	26.28	5.5 LBS/HR	22
MATTER	TYPICAL	4.00	14.4	0.24 GRADSCF		4	5.5 (LBS/HR)	212.321	19.80		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.

¹CHECK UNCONTROLLED EMISSION RATE BOX IF CONTROL EQUIPMENT IS USED. OTHERWISE CHECK AND PROVIDE THE ACTUAL EMISSION RATE TO ATMOSPHERE, INCLUDING INDOORS. SEE INSTRUCTIONS. ²PROVIDE THE EMISSION RATE THAT WILL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.
³PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G. PPM. GR/DSCF, ETC.)
⁴DM • DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP⊿2 OR AIRS). 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP⊿2 OR AIRS)
⁵RATE • ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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S S S S S S S S S S S S S S S S S S S	P 2CaS			(3	(38) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION	AIR POLLUTAN	IT EMISSION IN	IFORMATI	NO	
P	NAME OF HAP ACAS POUNDS PER TOURS FIRE ADM SPATE OF HAM AND ARE CLOS of TOURS FIRE ADM AND ARE CLOS of TOURS FIRE CLOS of TOURS FIRE ARE ARE ARE ARE ARE ARE ARE ARE ARE A				O 1ACTU	AL EMISSION RA NTROLLED EMIS	TE SION RATE			r RULE
75-21-8	Ethylene Oxide 75-21-8	NAME OF HAP EMITTED	2CAS NUMBER		POUNDS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	3OTHER TERMS	4DM	SRATE OR STANDARD	APPLICABLE
75-56-9 MAXIMUNI. See Exhibit 220-a PYPICAL MAXIMUNI. PYPICAL INPICAL MAXIMUNI. PYPICAL MAXIMUNI. TYPICAL MAXIMUNI. MAXIMUNI. TYPICAL MAXIMUNI. MAXIMUNI. TYPICAL MAXIMUNI. MAXIMUNI. TYPICAL MAXIMUNI. TYPICAL MAXIMUNI. TYPICAL MAXIMUNI. TYPICAL MAXIMUNI. TYPICAL MAXIMUNI. TYPICAL TYPICAL MAXIMUNI. TYPICAL TYPICAL MAXIMUNI. TYPICAL TYPICAL MAXIMUNI. TYPICAL TYPICAL TYPICAL MAXIMUNI. TYPICAL TYPICAL TYPICAL	Propylene Oxide 75-56-9 MAXIMUM See Exhibit 220-a TYPICAL MAXIMUM TYPICAL MAXIMUM TYPICAL MAXIMUM TYPICAL MAXIMUM TYPICAL See Exhibit MAXIMUM TYPICAL See Exhibit TYPICAL MAXIMUM TYPICAL TYPICAL TYPICAL See Exhibit	Ethylene Oxide	75-21-8	MAXIMUM:	See Exhibit	220-a				RULE
75-56-9 MAXIMUM See Exhibit 220-a	Propylene Oxide 75-56-9 MAXIMUM: TYPICAL MAXIMUM: T			TYPICAL						
TYPICAL NAXIMUM: TYPICAL	TYPICAL MAXIMUM: TYPICAL Propylene Oxide	75-56-9	MAXIMUM	See Exhibit	220-a					
TYPICAL MAXIMUM TYPICAL TYPI	TYPICAL NAVIMUM: TYPICAL S.O. 1.2 S8% by wt control device lear-tight trucks S.O. S.			TYPICAL					_	
TYPICAL	TYPICAL MAXIMUM: TYPICAL TY			MAXIMUM:	<u> </u> 					
TYPICAL MAXIMUM: TYPICAL See	TYPICAL WAXIMUM: TYPICAL TYPIC			TYPICAL						
TYPICAL MAXIMUM: TYPICAL 98% by wt control device leak-light trucks	TYPICAL MAXIMUM: TYPICAL 8.0 0.8 2 Healt-light frucks Heal			MAXIMUM						
TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL 8.0 0.8 2 Heak-tight frucks	TYPICAL MAXIMUM: TYPICAL B 0			TYPICAL						
TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL 98% by wt control device leak-tight trucks	TYPICAL MAXIMUM: TYPICAL TY			MAXIMUM:						
TYPICAL TYPICAL TYPICAL TYPICAL TYPICAL TYPICAL TYPICAL 10.0 1.2 98% by wf control device 1.2 1.	TYPICAL TYPICAL			TYPICAL						
TYPICAL MAXIMUM: 10.0 1.2 12 12 12 12 12 12 1	TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL MAXIMUM: TYPICAL Senzene 71432 TYPICAL 8.0 0.8 1.2 leak-tight trucks 10.0 1.2			MAXIMUM:						
TYPICAL	EXAMPLE: MAXIMUM: 10.0 1.2 98% by wt control device leak-tight trucks IMPORTANT: ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS: TO THE EXTENT THEY ARRESTORS DE LA TENT ON WARTHY ATTACH CALCULATIONS TO THE EXTENT THEY ATTACH CALCULATIONS TO THE TENT ON WARTHY ATTACH CALCULATIONS TO THE TENT ON WARTHY ATTACH CALCULATIONS TO THE TENT ON WARTHY ATTACH CALCULATIONS TO THE TENT OF THE TENT ON WARTHY ATTACH CALCULATIONS TO THE TENT OF THE			TYPICAL:						
TYPICAL	EXAMPLE: MAXIMUM: 10.0 1.2 98% by wt control device leak-Hight trucks Benzene 71432 TYPICAL 8.0 0.8 leak-Hight trucks IMPORTANT: ATTACH CALCULATIONS: TO THE EXTENT THEY ARE ARRESTORED BY ALL CONTROL OF STATES OF STATES OF ARRESTORED BY ALL CONTROL OF STATES OF			MAXIMUM						
TYPICAL TYPICAL	EXAMPLE: And TYPICAL TYPICAL 10.0 1.2 98% by wt control device 8.0 0.8 leak-tight trucks leak-tight trucks			TYPICAL						
TYPICAL 10.0 1.2 98% by wt control device 117PICAL 8.0 0.8 2 leak-tight trucks	EXAMPLE: MAXIMUM: 10.0 1.2 98% by wt control device Benzene 71432 TYPICAL 8.0 0.8 [eak-tight trucks]			MAXIMUM						
MAXIMUM: 10.0 1.2 2 98% by wt control device	EXAMPLE: Benzene 71432 TYPICAL 8.0 0.8 2 leak-tight frucks leak-tight frucks			TYPICAL						
71432 TYPICAL 8.0 0.8 2 leak-tight trucks	IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR REGIONS DELIATED ON MALICULATIONS CONTINUED TO THE EXTENT THEY ARE AIR REGIONS DELIATED ON MALICULATIONS.	EXAMPLE:		MAXIMUM:	10.0	1.2		2	98% by wt control device	CER 61
	IMPORTANT: ATTACH CALCULATIONS. TO THE EXTENT THEY ARE ARRESTONE BELATED ON MALICUL CHICAGO.	Benzene	71432	TYPICAL	8.0	0.8		2	leak-tight trucks	61.302(b) (d)

¹PROVIDE UNCONTROLLED EMISSIONS IF CONTROL EQUIPMENT IS USED. OTHERWISE, PROVIDE ACTUAL EMISSIONS TO THE ATMOSPHERE, INCLUDING INDOORS. CHECK BOX TO SPECIFY.

²CAS - CHEMICAL ABSTRACT SERVICE NUMBER.

⁹PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GRIDSCF, ETC.).

⁴DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP-42 OR AIRS, 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP-42 OR AIRS).

⁵RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

APPLICATION PAGE
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EXHAUST POINT INFORMATION							
THIS SECTION SHOULD NOT BE COMPLETED IF EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT. 39) FLOW DIAGRAM DESIGNATION OF EXHAUST POINT:							
39) FLOW DIAGRAM DESIGNATION OF E	XHAUST POINT:						
WB1 Scrubber #2 with dry bed							
40) DESCRIPTION OF EXHAUST POINT (DISCHARGES INDOORS, DO NOT CO	STACK, VENT, ROC IMPLETE THE REM	OF MONITOR, INDOO AINING ITEMS.	RS, ETC.). IF THE EXHAUST POINT				
Outside Stack							
41) DISTANCE TO NEAREST PLANT BOU	INDARY FROM EXH	AUST POINT DISCH	ARGE (FT):				
approx 20 feet							
42) DISCHARGE HEIGHT ABOVE GRADE	(FT)						
approx 30 feet							
43) GOOD ENGINEERING PRACTICE (GI	P) HEIGHT, IF KNO	WN (FT):					
Unknown 44) DIAMETER OF EXHAUST POINT (FT): NOTE: FOR A NON CIRCULAR EXHAUST POINT, THE DIAMETER IS							
44) DIAMETER OF EXHAUST POINT (FT) 1.128 TIMES THE SQUARE ROOT OF		N CIRCULAR EXHAL inches					
45) EXIT GAS FLOW RATE	a) MAXIMUM (ACF	M):	b) TYPICAL (ACFM):				
	15	,500	15,500				
46) EXIT GAS TEMPERATURE	a) MAXIMUM (°F):		b) TYPICAL (°F)::				
approx 75 approx 75							
47) DIRECTION OF EXHAUST (VERTICAL, LATERAL, DOWNWARD):							
Vertical							
48) LIST ALL EMISSION UNITS AND CONTROL DEVICES SERVED BY THIS EXHAUST POINT:							
NAME FLOW DIAGRAM DESIGNATION							
a) Aeration Rooms (current)		AR					
b) Sterilizer Backvent SC1, SC2	, SC3, SC4	Backvent					
c) Backup for Sterlizer Chamber	s SC1-4	vacuum pur	mp				
d)							
e)							
THE FOLLOWING INFORMATION NEED ONLY	BE SUPPLIED IF READ	I b) LONGITUDE:					
49a) LATITUDE:		5, 2011311002					
FOUNTA ZONE	b) UTM VERTICAL	(KM):	c) UTM HORIZONTAL (KM):				
50) UTM ZONE:	2,01111 101111011	- 4171/F					



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL — PERMIT SECTION P.O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

FOR AP	PLIC	CANT	'S USE
Revision #:			
Date:	_/		_ /
Page		_ of	
Source Design	gnat	ion:	

SPRINGFIELD, ILLINOIS 624	Source Designation:							
	FOR AGENCY USE ONLY							
PROCESS EMISSION UNIT	ID NUMBER:							
DATA AND INFORMATION	EMISSION POINT #:							
	DATE;							
SOURCE II	IFORMATION							
1) SOURCE NAME:	III O'RIIIA 17.014							
Sterigenics US, LLC								
2) DATE FORM	3) SOURCE ID NO.							
PREPARED: 30 May 2018	(IF KNOWN): 043110AAC							
GENERAL I	NFORMATION							
NAME OF EMISSION UNIT: (1) Ethylene Oxide/Propylene oxide Sterilization								
5) NAME OF PROCESS:								
Sterilization of medical products and spices								
6) DESCRIPTION OF PROCESS:								
Chemical Sterilization								
7) DESCRIPTION OF ITEM OR MATERIAL PRODUCED OR ACTIVITY ACCOMPLISHED:								
Sterilized Medical Supplies and Treated Spices								
8) FLOW DIAGRAM DESIGNATION OF EMISSION UNIT:								
Sterilizer Chambers								
9) MANUFACTURER OF EMISSION UNIT (IF KNOWN):								
Unknown								
10) MODEL NUMBER (IF KNOWN):	11) SERIAL NUMBER (IF KNOWN):							
unknown	unknown							
12) DATES OF COMMENCING CONSTRUCTION,	a) CONSTRUCTION (MONTH/YEAR):							
OPERATION AND/OR MOST RECENT MODIFICATION OF THIS EMISSION UNIT (ACTUAL OR PLANNED)	June 1984							
The children of the force of the children	b) OPERATION (MONTH/YEAR):							
	May 1985							
	c) LATEST MODIFICATION (MONTH/YEAR):							
	November 1990							
13) DESCRIPTION OF MODIFICATION (IF APPLICABLE):								
The sterilization chambers includes the chamber v								
vent (backvent) as one emission unit. The chambi	ar exhaust year currently exhausts uppostrolled to							

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

atmosphere. This modification proposes to control the backvent with scrubber #2 and dry bed reactor.

APPLICATION PAGE <u>닉O</u>

FOR APPLICANT'S USE

14) DOES THE EMISSION UNIT HAV	E MO	RE THAN ONE	MODE	OF O	PERATIO	N?		X) YE	5	ON O		
IF YES, EXPLAIN AND IDENTIFY A SEPARATE PROCESS EMISSI- FOR EACH MODE):	ON UN	IIT FORM 220	-CAAPI	P MUS	T BE COM	/IPLI	ETED					
The sterilization chambers inclu	ıdes	he chambe	r vent	(via v	acuum	pun	np) and the	chamb	oer (exhaust		
vent (backvent) as one emissio	n uni	The chan	nber b	ackve	ent modi	fica	tion is cove	red by	this	s form. The		
chamber vent is controlled by V								_				
15) PROVIDE THE NAME AND DESIGN UNIT, IF APPLICABLE MUST BE COMPLETED FOR EACH	(FOR	M 260-CAAPP M OF AIR PO	AND 1	THE AF	PROPRIA NTROL E	ATE DUI	260-CAAPP A PMENT):	DDENE	DUM	FORM		
The chamber backvent is curre	ntly u	ncontrolled	This	appli	cation p	rop	oses to duc	t the c	han	nber		
exhaust vent (backvent) to the	existi	ng Acid Scr	ubber	(scru	bber #2) wi	th Dry Bed	Reacto	or. T	ihe		
information provided below is re	equir	ed for the ex	kisting	contr	ol devic	e.						
16) WILL EMISSIONS DURING STAF RATE PURSUANT TO A SPECIF ESTABLISHED BY AN EXISTING	IC RUI	.E. OR THE A	LLOWA	ABLE E	MISSION	LIM	SSION (IT AS) YE	S	⊠ _{NO}		
IF YES, COMPLETE AND ATTAC EXCESS EMISSIONS DURING S	TART	JP OF EQUIP	MENT".									
17) PROVIDE ANY LIMITATIONS ON	SOU	RCE OPERAT	ION AF	FECTI	NG EMIS	1012	IS OR ANY W	ORK PI	RAC	TICE		
STANDARDS (E.G., ONLY ONE) Monthly usage limitations for p	ronyle	one oxide at	nd eth	vlene	oxide si	hall	not exceed	2800	pou	inds and		
70,000 pounds respectively for	all e	mission unit	s in W	/illowb	rook I.	,,,_,,						
	41. 6 .											
OPERATING INFORMATION												
OPERATING INFORMATION 18) ATTACH THE CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSION RELATED, FROM WHICH THE												
18) ATTACH THE CALCULATIONS, TO THE EXTENT THEY ARE AIR ÉMISSION RELATED, FROM WHICH THE FOLLOWING OPERATING INFORMATION, MATERIAL USAGE INFORMATION AND FUEL USAGE DATA WERE BASED AND LABEL AS EXHIBIT 220-1. REFER TO SPECIAL NOTES OF FORM 202-CAAPP.												
19a) MAXIMUM OPERATING HOUR												
8760 per year		24	4			7	7 52 ·					
b) TYPICAL OPERATING HOURS		HOURS/DAY	(::		DAYS/M	/EEI	<u> </u>					
8600 per year		24				7	7 WEERS/YEAR:					
20) ANNUAL THROUGHPUT		DEC-FEB(%	Ye.	MAR	MAY(%):		/ 52 JUN-AUG(%): SEP-NOV(%):					
20) ANNOAL TITLOGGIII GI		25	<i>y</i>		25		25	, ,				
	М	ATERIAL U	ISAGI	E INF	ORMAT	101	V					
	_	MAXIMU	JM RAT	ES			Т	YPICAL	.RA	TES		
21a) RAW MATERIALS	1	BS/HR		TONS/	YEAR	ŀ	LBS/HR		Τ	TONS/YEAR		
Ethylene Oxide					420							
Propylene oxide					17	ľ						
						ŀ						
			\vdash					-				

		MAXIM	UM F	RATES		TYPIC	AL F	RATES
21b) PRODUCTS	_	LBS/HR	$\overline{}$	TONS/YEAR		LBS/HR		TONS/YEAR
N/A					\vdash		1	
			ŀ		-		1	
	<u> </u>		-		-			
	<u> </u>		-		-			
			-					
			-					
								<u> </u>
		MAXIMU	JM R	ATES		TYPIC	AL R	ATES
21c) BY-PRODUCT MATERIALS		LBS/HR		TONS/YEAR		LBS/HR		TONS/YEAR
N/A								
								<u> </u>
			-		-		-	
			-		-		-	<u> </u>
FUEL USAGE DATA								
22a) MAXIMUM FIRING RATE (MILLION BTU/HR):	(IMUM FIRING RATE b) TYPICAL FIRING RA					ESIGN CAPAC PATE (MILLION	ITY I BTU	FIRING J/HR):
N/A			N/A N/A					
d) FUEL TYPE:								
ONATURAL GAS OFUE	L OIL	.: GRADE NUM	BER	Occ	DAL			
IF MORE THAN ONE FUEL IS U	ISED	ATTACH AN E	XPL	ANATION AND LAB	EL AS E	EXHIBIT 220-2		-
e) TYPICAL HEAT CONTENT OF F BTU/GAL OR BTU/SCF):	UEL	(BTU/LB,		f) TYPICAL SULF GAS):	ÚR CO	NTENT (WT %	., NA	FOR NATURAL
g) TYPICAL ASH CONTENT (WT GAS):	%., N	A FOR NATUR	AL	h) ANNUAL FUE SCF/YEAR, G/	L USAC AL/YEA	BE (SPECIFY UR R, TON/YEAR	ЈИ Т :):	S, E.G.,
23) ARE COMBUSTION EMISSIONS PROCESS UNIT EMISSIONS?	DUC	TED TO THE	SAM	E STACK OR CONTI	ROL AS) YE	s No
IF NO, IDENTIFY THE EXHAUST	r POI	NT FOR COME	BUST	ION EMISSIONS:				

		APPLICABLE RULES		
24)	24) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITA	AND LIMITATION(S) SET BY RULE(S) WHICH ARE AP	TION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218.204(i)(4), 3.5 LBS/GAL):	
	REGULATED AIR POLLUTANT(S)	EMISSION STANDARD(S)	אבתחועבושנית (פ)	
	VOM (WB1 Scrubber 2)	35 IAC 218.302(b)	At least 85% recovery of total uncontrolled org. mat.	-
-	HAP (WB1 Scrubber 2)	40CFR 63.362	99% reduction or 1 ppm outlet	_
25)	PROVIDE ANY SPECIFIC RECORDICEPING RULE	25) PROVIDE ANY SPECIFIC RECORDICEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:		1
	REGULATED AIR POLLUTANT(S)	RECORDKEEPING RULE(S)	REQUIREMENT(S)	
	Standards don't apply to backvent	40 CFR 63.10	MACT recordkeeping and reporting	
	but do apply to WB1 Scrubber 2			
26)	26) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT	IICH ARE APPLICABLE TO THIS EMISSION UNIT:		
•	REGULATED AIR POLLUTANT(S)	REPORTING RULE(S)	REQUIREMENT(S)	
	Standards don't apply to backvent	40 CFR 63.10	MACT recordkeeping and reporting	
-	but do apply to WB1 Scrubber 2			-
27)	27) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT	WHICH ARE APPLICABLE TO THIS EMISSION UNIT:		
	REGULATED AIR POLLUTANT(S)	MONITORING RULE(S)	REQUIREMENT(S)	
	HAP monitoring applies to	40CFR 63.364	Weekly Scrubber liquor level	
-	WB1 Scrubber 2 and dry beds	40CFR 63.364	Weekly EO concentration from dry beds	
28	PROVIDE ANY SPECIFIC TESTING RULES AND/O	28) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDURES WHICH ARE APPLICABLE TO THIS EMISSION UNIT		
	REGULATED AIR POLLUTANT(S)	TESTING RULE(S)	KEGUIKEMEN (S)	
	HAP applies to WB1 Scrubber 2	40 CFR63.365	Testing of control equipment	

29) DOES THE EMISSION I OTHERWISE APPLICAS	UNIT QUALIFY FOR AN EXEM BLE RULE?	MPTION FROM AN	YES	⊗ NO					
SUPPORTING DATA AN	E A DETAILED EXPLANATION	IT IS EXEMPT AND THE RULE V N JUSTIFYING THE EXEMPTION H AND LABEL AS EXHIBIT 220-3 THIS EXEMPTION.	L INCLUDE DETA	MED					
	COMPLIAN	ICE INFORMATION							
30) IS THE EMISSION UNIT REQUIREMENTS?	IN COMPLIANCE WITH ALL	APPLICABLE	X YES	O NO					
IF NO, THEN FORM 294 COMPLYING EMISSION	-CAAPP "COMPLIANCE PLA I UNITS" MUST BE COMPLE"	N/SCHEDULE OF COMPLIANCE FED AND SUBMITTED WITH THI	ADDENDUM F S APPLICATION.	OR NON					
31) EXPLANATION OF HOV	VINITIAL COMPLIANCE IS TO	D BE, OR WAS PREVIOUSLY, D	EMONSTRATED:						
Ethylene Oxide and Pr	ropylene oxide usage is								
WB Scrubber 2 was te	sted January 23, 2003								
	-								
32) EXPLANATION OF HOW ONGOING COMPLIANCE WILL BE DEMONSTRATED:									
32) EXPLANATION OF HOW	ONGOING COMPLIANCE W	ILL BE DEMONSTRATED:							
		Oxide (PO) usage. (month		i					
		r liquor level weekly, pH we							
EO concentration is che	ecked weekly to determi	ne proper operation of the I	Dry Bed Unit.						
	•		,						
i									
TESTING MONITORING RECORDINE AND REPORTING									
TESTING, MONITORING, RECORDKEEPING AND REPORTING 33a) LIST THE PARAMETERS THAT RELATE TO AIR EMISSIONS FOR WHICH RECORDS ARE BEING MAINTAINED TO									
DETERMINE FEES. RUI	LE APPLICABILITY OR COM	PLIANCE. INCLUDE THE UNIT (S ARE BEING MA	INTAINED TO					
METHOD OF MEASURE	MENT, AND THE FREQUEN	CY OF SUCH RECORDS (E.G., I	HOURLY, DAILY.	WEEKLY):					
			· · · · · , - · · · - · ,						
PARAMETER				NIENOV.					
PARAMETER	UNIT OF MEASUREMENT	METHOD OF MEASUREMENT		DUENCY					
Sterilant Usage			monthly	DUENCY					
	UNIT OF MEASUREMENT	METHOD OF MEASUREMENT		DUENCY					
Sterilant Usage Liquor level	UNIT OF MEASUREMENT pounds inches	METHOD OF MEASUREMENT Operating data Operating data	monthly weekly	DUENCY					
Sterilant Usage	UNIT OF MEASUREMENT	METHOD OF MEASUREMENT Operating data	monthly	DUENCY					
Sterilant Usage Liquor level	UNIT OF MEASUREMENT pounds inches	METHOD OF MEASUREMENT Operating data Operating data	monthly weekly	DUENCY					
Sterilant Usage Liquor level	UNIT OF MEASUREMENT pounds inches	METHOD OF MEASUREMENT Operating data Operating data	monthly weekly	DUENCY					

33b) BRIEFLY DESCRIBE THE METHOD BY WHICH RECORDS WILL BE CREATED AND MAINTAINED. FOR EACH RECORDED PARAMETER INCLUDE THE METHOD OF RECORDKEEPING, TITLE OF PERSON RESPONSIBLE FOR									
RECORDED PARAMETER INCLUDE THE METHOD OF RECORDREEPING, THE OF PERSON RESPONSIBLE FOR RECORDREEPING, AND TITLE OF PERSON TO CONTACT FOR REVIEW OF RECORDS:									
	PARAMETER	METHOD OF RECORDKEEPING		TITLE OF PERSON RESPONSIBLE		TITLE CONTACT F			
	Sterilant usage	Operating report		General Manager		EH&S			
	Liquor Level	PM records		General Manager		EH&S			
	EO conc	PM Records		General Manager		EH&S			
			J 						
	COMPLIANCE OF THE	EMISSION UNIT READILY	DEI	MONSTRATED BY REVIEW OF		X YES	O NO		
IF	NO, EXPLAIN:								
	, , , , , , , , , , , , , , , , , , , ,								
et e									
d) Al	RE ALL RECORDS REA	ADILY AVAILABLE FOR INSP ENCY UPON REQUEST?	PEC	TION, COPYING AND		X YES	O NO		
	-	ENCY UPON REQUEST?							
I IF	NO, EXPLAIN:								
							:		
34a) DESCRIBE ANY MONITORS OR MONITORING ACTIVITIES USED TO DETERMINE FEES, RULE APPLICABILITY OR									
COMPLIANCE:									
Monitor and record the level of the scrubber liquor in recirculation tank. Monitor the EtO concentration entering and exiting the AATDry Beds.									
Monitor the EtO concentration entering and exiting the AATDry Beds.									
b) WHAT PARAMETER(S) IS(ARE) BEING MONITORED (E.G., VOM EMISSIONS TO ATMOSPHERE)?									
	el of scrubber liquor								
EtO	levels from the AAT	Dry Beds.							
c) D	ESCRIBE THE LOCATI	ON OF EACH MONITOR (E.	G.,	IN STACK MONITOR 3 FEET FR	OM	EXIT):			

34d) IS EACH MONITOR EQUIPPED	WITH A RECORDING DEVICE	?		0.,,,,,	
IF NO, LIST ALL MONITORS WITI	HOUT A RECORDING DEVICE:			U YES	U NO
N/A	THE STATE OF THE S				
'*/'					
e) IS EACH MONITOR REVIEWED F	OR ACCURACY ON AT LEAST	A OLIABTEDI			
BASIS?	ON ACCORACT ON AT LEAST /	QUARTERI	L¥	U YES	U NO
IF NO, EXPLAIN:					
N/A					
f) IS EACH MONITOR OPERATED A	T ALL TIMES THE ASSOCIATED	EMICCION	LIMIT IC		
IN OPERATION?	THE TIMES THE ASSOCIATED	EMISSION	UNIT IS	U YES	× NO
IF NO, EXPLAIN:					
No continuous monitoring is rec	quired.				
	•				
35) PROVIDE INFORMATION ON THE	MOST PECENT TESTS IF ANY	- IN MANUSCH	THE SEAL		
PURPOSES OF THE DETERMINAT	TION OF FEES. RULE APPLICAI	BILITY OR C	OMPLIANO	SE INCLUDE TH	ETECT
DATE, TEST METHOD USED, TES SUMMARY OF RESULTS. IF ADD	TING COMPANY, OPERATING I	CONDITIONS	S EYISTIN	2 DI IDING THE T	EST AND A
	THE STREET, A			EXHIBIT 220-4:	
TEST DATE TEST METHOD	TESTING COMPANY	OPERAT CONDITI		SUMMARY OF I	RESULTS
1/21/03	Kremer Env.	Normal		> 99% efficie	encv
36) DESCRIBE ALL REPORTING REQUESTIONS TO THE AGENCY:	JIREMENTS AND PROVIDE THE	TITLE AND	FREQUE	CY OF REPORT	
	_				
REPORTING REQUIREMENTS	TITLE OF REPORT			FREQUENCY	
Annual emissions report	Annual emissions rep	ort	annual		
Excess emissions	Excess emissions		semi-a	nnual	

					(37)E	MISSION II	(37) EMISSION INFORMATION	NON				
			1 ACTUAL EMISSION RATE 1 UNCONTROLLED EMISSK	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RATE		ALLOW	VABLE BY I	ALLOWABLE BY RULE EMISSION RATE	N RATE	² PERMITTED EMISSION RATE	SION RATE
REGULATED AIR POLLUTANT		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	3OTHER TERMS	3OTHER TERMS	4DM	⁵ RATE	(UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON	MAXIMUM:							^				
MONOXIDE (CO)	TYPICAL:							î				
LEAD	MAXIMUM:											
	TYPICAL:											
NITROGEN	MAXBMUM:											
OXIDES (NOx)	TYPICAL:											
PARTICULATE	MAXIMUM:											
MATTER (PART)	TYPICAL:											
PARTICULATE MATTER <= 10	махімим:							<u> </u>				
MICROMETERS (PM10)	TYPICAL:							<u></u>				
SULFUR	махімим:							^				
DIOXIDE (SO2)	TYPICAL:							^				
VOLATILE	MAXIMUM:							^ _				
MATERIAL (VOM)	TYPICAL:							^				
OTHER, SPECIFY:	махимим:	See Ex.	220-а					^				
	TYPICAL							7				
EXAMPLE: PARTICULATE	MAXIMUM:	5.00	21.9	0.3 GRDSCF		1	6.0 (LE	6.0 (LBS/HR)	212.321	26.28	5.5 LBS/HR	22
MATTER	TYPICAL	4.00	14.4	0.24 GR/DSCF		4	5.5 (LE	5.5 (LBS/HR)	212.321	19.80		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.

CHECK UNCONTROLLED EMISSION RATE BOX IF CONTROL EQUIPMENT IS USED. OTHERWISE CHECK AND PROVIDE THE ACTUAL EMISSION RATE TO ATMOSPHERE, INCLUDING INDOORS. SEE INSTRUCTIONS.

2 PROVIDE THE EMISSION RATE THAT WILL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.

3 PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G. PPM, GROSGF, ETC.)

4 DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP-42 OR AIRS), 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP-42 OR AIRS)

5 RATE - ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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220-CAAPP

			(38)	HAZARDOUS	(38) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION	T EMISSION IN	IFORMATIC	NC	
				O 1ACTU	O 1ACTUAL EMISSION RATE O 1UNCONTROLLED EMISSION RATE	TE SION RATE	-	ALLOWABLE BY RULE	ULE
NAME OF HAP EMITTED	2CAS NUMBER			POUNDS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	30THER TERMS	4DM	⁵ RATE OR STANDARD	APPLICABLE
Ethylene Oxide	75-21-8	MAX	МАХІМИМ	See Exhibit	220-a				
		TYPICAL	CAL						
Propylene Oxide	75-56-9	MAX	MAXIMUM	See Exhibit	220-a				
		TYPICAL	CAL						
		MAX	MAXIMUM						
		TYPICAL	CAL	:					
		MAX	MAXIMUM						
		ξ	TYPICAL						
		MAX	MAXIMUM:						
		TYPICAL	CAL						
		MAX	MAXIMUM:						
		TYPICAL	CAL						
		MAXI	MAXIMUM						
		TYPICAL	CAL						
		MAXI	MAXIMUM:						
		TYPICAL	Sel.						
CVANDI C.			MAXIMINA						
EAAMPLE:		Mrs	IMUM:	10.0	1.2		2	98% by wt control device	CFR 61
Benzene	71432	TYPICAL	3	8.0	0.8		2	leak-tight trucks	61.302(b),(d)
IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED ON WHICH FMISSIONS WERE RETERMINED AND LABEL AS EVUIDIT 220.6	CULATIONS, TO THE	EXTENT 1	THEY ARE	AIR FMISSIONS REL	ATED ON WHICH FINE	REIONS WERE DETE	A I CAN CHAIR	COEL AS EVUIDIT 220.5	

ON IAN I SATIACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.

¹PROVIDE UNCONTROLLED EMISSIONS IF CONTROL EQUIPMENT IS USED. OTHERWISE, PROVIDE ACTUAL EMISSIONS TO THE ATMOSPHERE, INCLUDING INDOORS. CHECK BOX TO SPECIFY, 2CAS - CHEMICAL ABSTRACT SERVICE NUMBER.

³PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GRODSCF, ETC.).

⁴DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP 42 OR AIRS, 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP 42 OR AIRS).

⁵RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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		T INFORMATION					
THIS SECTION SHOULD NOT BE COMPLETED	IF EMISSIONS ARE EX	KHAUSTED THROUGH A	IR POLLUTION CONTROL EQUIPMENT.				
39) FLOW DIAGRAM DESIGNATION OF E	XHAUST POINT:						
WB1 Scrubber #2 with dry bed							
40) DESCRIPTION OF EXHAUST POINT (DISCHARGES INDOORS, DO NOT CO	STACK, VENT, ROO MPLETE THE REM	OF MONITOR, INDOO MAINING ITEMS.	RS, ETC.). IF THE EXHAUST POINT				
Outside Stack							
41) DISTANCE TO NEAREST PLANT BOL	INDARY FROM EXI	AUST POINT DISCH	ARGE (FT):				
approx 20 feet							
42) DISCHARGE HEIGHT ABOVE GRADE	(FT):						
approx 30 feet							
43) GOOD ENGINEERING PRACTICE (GE	P) HEIGHT, IF KNO	OWN (FT):					
Unknown							
44) DIAMETER OF EXHAUST POINT (FT): 1.128 TIMES THE SQUARE ROOT OF		N CIRCULAR EXHAU inches	ST POINT, THE DIAMETER IS				
45) EXIT GAS FLOW RATE	a) MAXIMUM (ACF	M):	b) TYPICAL (ACFM):				
	15	,500	15,500				
46) EXIT GAS TEMPERATURE	a) MAXIMUM (°F):		b) TYPICAL (*F):				
· ·	арр	rox 75	approx 75				
47) DIRECTION OF EXHAUST (VERTICAL Vertical	, LATERAL, DOWN	IWARD):					
48) LIST ALL EMISSION UNITS AND CONTROL DEVICES SERVED BY THIS EXHAUST POINT:							
NAME FLOW DIAGRAM DESIGNATION							
a) Aeration Rooms (current) AR							
b) Sterilizer Backvent SC1, SC2	SC3, SC5	Backvent					
c) Backup for Sterlizer Chamber	s SC1-3, 5	vacuum pur	vacuum pump				
d)							
e)							
THE FOLLOWING INFORMATION NEED ONLY 49a) LATITUDE:	BE SUPPLIED IF REAL	b) LONGITUDE:					
1 490) ENTRODE.		2, 20110110					
50) UTM ZONE	b) UTM VERTICA	L (KM):	c) UTM HORIZONTAL (KM):				



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION P.O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

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Source Designation:
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PROCESS EMISSION UNIT DATA AND INFORMATION

FOR AGENCY USE ONLY
ID NUMBER;
EMISSION POINT #:
DATE:

SOURCE IN	FORMATION	
1) SOURCE NAME:		
Sterigenics US, LLC		
2) DATE FORM PREPARED: 27 Dec 2017	3) SOURCE ID NO. (IF KNOWN):	043110AAC

	NFORMATION
4) NAME OF EMISSION UNIT:	
WB1 (3) Aeration Rooms	
5) NAME OF PROCESS:	
Aeration of Sterilized medical products and spice	es
6) DESCRIPTION OF PROCESS:	
Chemical Sterilization	
7) DESCRIPTION OF ITEM OR MATERIAL PRODUCED OR A	CTIVITY ACCOMPLISHED:
Sterilized Medical Supplies and Treated Spices	
8) FLOW DIAGRAM DESIGNATION OF EMISSION UNIT:	
Aeration Rooms	
9) MANUFACTURER OF EMISSION UNIT (IF KNOWN):	
Unknown	
10) MODEL NUMBER (IF KNOWN):	11) SERIAL NUMBER (IF KNOWN):
unknown	unknown
12) DATES OF COMMENCING CONSTRUCTION,	a) CONSTRUCTION (MONTH/YEAR):
OPERATION AND/OR MOST RECENT MODIFICATION OF THIS EMISSION UNIT (ACTUAL OR PLANNED)	June 1984
The same of the sa	b) OPERATION (MONTH/YEAR):
	May 1985
	c) LATEST MODIFICATION (MONTH/YEAR):
	March 1998
13) DESCRIPTION OF MODIFICATION (IF APPLICABLE):	

The aeration rooms have an emission limit of 3.6 lbs/hr and 15.77 tons/year pursuant to construction permit 96120054. These emission limits exceed the potential emissions. This application requests

the emission limits to align with the potential emissions.

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.



FOR APPLICANT'S USE

14) DOES THE EMISSION UNIT HAV	Æ MOI	RE THAN ONE	MODI	E OF C	PERATIO	N?	(_) YES	S	Ø NO
IF YES, EXPLAIN AND IDENTIFY A SEPARATE PROCESS EMISSI FOR EACH MODE):	WHIC	H MODE IS CONIT FORM 220	OVERI -CAAP	ED BY P MUS	THIS FOR T BE COM	M (N	NOTE: ETED			
								_		
15) PROVIDE THE NAME AND DESI EMISSION UNIT, IF APPLICABLE MUST BE COMPLETED FOR EA	E (FOR CH ITE	M 260-CAAPP M OF AIR PO	AND '	THE A	PROPRIA	TE:	260-CAAPP A	CONTRO	OLLIN DUM F	IG THIS FORM
WB1 Acid Scrubber (scrubber :	#2) w	ith Dry Bed	Reac	tor.						
16) WILL EMISSIONS DURING STAF RATE PURSUANT TO A SPECIF ESTABLISHED BY AN EXISTING	IC RU	LE, OR THE AL	LLOW/	ABLE E	MISSION	MIS	SSION IT AS	YE	s	⊗ NO
IF YES, COMPLETE AND ATTAC EXCESS EMISSIONS DURING S	HFO	RM 203-CAAPI JP OF EQUIPI	P, "REG	QUEST	TO OPER	RATE	E WITH			
17) PROVIDE ANY LIMITATIONS ON	SOU	RCE OPERATI	ON AF	FECTI	NG EMISS	ION	IS OR ANY W	ORK P	RACT	ICE
STANDARDS (E.G., ONLY ONE Monthly usage limitations for p	UNIT I	S OPERATED	AT A T	IME):	ovido sh	all	not eveced	2800	DOLL	nde and
70,000 pounds respectively for		erilization ci	namo	ers III	AAIIIOAADI	1001	K I. FULCIILI	ai eiiiis	55101	is all
calculated based on this usage										
<u> </u>										_
		OPERATII	NG IN	IFOR	MATION					
18) ATTACH THE CALCULATIONS, FOLLOWING OPERATING INFO BASED AND LABEL AS EXHIBIT	RMAT	E EXTENT TH	EY AR	E AIR GE INI	EMISSION ORMATIC	RE ON A	AND FUEL US	M WHIC	H TH ATA V	E VERE
								14/55/	00/15	A.D.:
·	MAXIMUM OPERATING HOURS HOURS/DAY: DAYS/WEEK: WEEKS/YEAR:									
, ,	8760 per year 24 7 52									
b) TYPICAL OPERATING HOURS										
8600 per year		24	24 7 52							2
20) ANNUAL THROUGHPUT		DEC-FEB(%)							'-NOV(%):	
		25			25		25			25
	M	ATERIAL U	SAGI	E INF	ORMATI	ON	1			
	,,,									
,							-	VDIOAL	CATI	
İ		MAXIMU	M RAI	ES			ı	YPICAL	RAIL	=5
21a) RAW MATERIALS	ı	BS/HR	Τ.	TONS/	YEAR	r	LBS/HR		1	TONS/YEAR
Ethylene Oxide					420	f				
Propylene oxide					17	Γ				
. ropylotic oxido			-			-		_	\vdash	
										-
			\vdash			H			\vdash	

		MAXIMUM	RATES	TYPICA	AL RATES
21b) PRODUCTS		LBS/HR	TONS/YEAR	LBS/HR	TONS/YEAR
N/A				-	
N/A	_		<u> </u>		
		MAXIMUM	RATES	TYPICA	L RATES
21c) BY-PRODUCT MATERIALS		LBS/HR	TONS/YEAR	LBS/HR	TONS/YEAR
N/A					
,					
		Elici i	ISAGE DATA		
22a) MAXIMUM FIRING RATE		b) TYPICAL FIR	RING RATE	c) DESIGN CAPACI	TY FIRING
(MILLIÓN BTU/HR):		(MILLION BT	ru/HR):	RATE (MILLION	BTU/HR):
N/A		r	N/A	N/	A
d) FUEL TYPE:					
ONATURAL GAS OFUE	L OIL	L: GRADE NUMBI	ER Oct	DAL OTHER_	
IF MORE THAN ONE FUEL IS U					
e) TYPICAL HEAT CONTENT OF F			f) TYPICAL SULF	UR CONTENT (WT %	NA FOR NATURAL
BTU/GAL OR BTU/SCF):			GAS):	100	
g) TYPICAL ASH CONTENT (WT GAS):	%., N	A FOR NATURAL		L USAGE (SPECIFY U	NITS, E.G.,
Ghaj.			SUPITEAN, G	ALYEAR, TONYEAR):	6 77
23) ARE COMBUSTION EMISSIONS PROCESS UNIT EMISSIONS?	DUC	CTED TO THE SA		ROL AS	YES O NO
IF NO, IDENTIFY THE EXHAUST	r POI	INT FOR COMBU	STION EMISSIONS:		

		APPLICABLE RULES	THE STATE OF LEGISLATION
4) PROVIDE	: ANY SPECIFIC EMISSION STANDARD(S) A REGULATED AIR POLLUTANT(S)	AND LIMITATION(S) SET BY RULE(S) WHICH ARE AF EMISSION STANDARD(S)	24) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITATION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218.204(j)(4), 3.5 LBS/GAL): REGULATED AIR POLLUTANT(S) EMISSION STANDARD(S)
NOV		35 IAC 218.302(b)	At least 85% recovery of total uncontrolled org. mat.
HAP		40CFR 63.362	99% reduction or 1 ppm outlet
25) PROVIDE,	ANY SPECIFIC RECORDKEEPING RULE(25) PROVIDE ANY SPECIFIC RECORDKEEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:	
ec	REGULATED AIR POLLUTANT(S)	RECORDKEEPING RULE(S)	REQUIREMENT(S)
HAP		40 CFR 63.10	MACT recordkeeping and reporting
26) PROVIDE	ANY SPECIFIC REPORTING RULE(S) WH	26) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:	
E	REGULATED AIR POLLUTANT(S)	REPORTING RULE(S)	REQUIREMENT(S)
HAP		40 CFR 63.10	MACT recordkeeping and reporting
L	ANY SPECIFIC MONITORING RULE(S) WI	27) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:	
	REGULATED AIR POLLUTANT(S)	MONITORING RULE(S)	REQUIREMENT(S)
HAP		40CFR 63.364	Weekly Scrubber liquor level
		40CFR 63.364	Weekly EO concentration from dry beds
		TOTAL TRACTION AND TOTAL PROPERTY OF THE PROPE	MICELON I BAIT
28) PROVIDE R	: ANY SPECIFIC TESTING RULES AND/OR REGULATED AIR POLLUTANT(S)	28) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDURES WHICH ARE APPLICABLE TO THIS EMISSION UNIT. REGULATED AIR POLLUTANT(S)	MISSION UNIT : REQUIREMENT(S)
HAP		40 CFR63.365	Testing of control equipment

29) DOES THE EMISSION L OTHERWISE APPLICAE	INIT QUALIFY FOR AN EXEM ILE RULE?	IPTION FROM AN	YES	⊗ NO
EXEMPTION, PROVIDE SUPPORTING DATA AN	A DETAILED EXPLANATION	IT IS EXEMPT AND THE RULE V JUSTIFYING THE EXEMPTION I AND LABEL AS EXHIBIT 220-3 HIS EXEMPTION.	. INCLUDE DETA	AILED
	COMPLIAN	ICE INFORMATION		
30) IS THE EMISSION UNIT REQUIREMENTS?	IN COMPLIANCE WITH ALL	APPLICABLE	⊠ YES	O NO
IF NO, THEN FORM 294 COMPLYING EMISSION	-CAAPP "COMPLIANCE PLAN UNITS" MUST BE COMPLET	N/SCHEDULE OF COMPLIANCE ED AND SUBMITTED WITH THI	ADDENDUM F IS APPLICATION.	OR NON
31) EXPLANATION OF HOW	INITIAL COMPLIANCE IS TO	BE, OR WAS PREVIOUSLY, D	EMONSTRATED:	
WB1 Scrubber 2 was t	ested January 23, 2003			
3				3
32) EXPLANATION OF HOW	ONGOING COMPLIANCE W	ILL BE DEMONSTRATED:		
WR1 Scrubber 2 is requ	uired to monitor corubbo	r liquor level weekly, pH we	s m left e	
		ne proper operation of the l		ĺ
EO CONCENTIALION IS CIN	sched weekly to determin	ie proper operation of the i	Dry Bed Unit.	
				- 1
TESTING, MONITORING, RECORDKEEPING AND REPORTING				
33a) LIST THE PARAMETER	S THAT RELATE TO AIR EM	SSIONS FOR WHICH RECORD	S ARE BEING MA	VINTAINED TO
METHOD OF MEASURE	EMENT, AND THE FREQUEN	PLIANCE. INCLUDE THE UNIT (CY OF SUCH RECORDS (E.G.,	HOURLY, DAILY,	NT, THE WEEKLY):
PARAMETER	INIT OF MEASUREMENT	METUOD OF MEACHING ASSET	p= 100 am	OUTNOY
	UNIT OF MEASUREMENT	METHOD OF MEASUREMENT		QUENCY
EO conc	ppm	GLC from dry bed	weekly	
Liquor level	inches	Operating data	weekly	

RECORDED PARAMET	ER INCLUDE THE METHOD	CORDS WILL BE CREATED AND M O OF RECORDKEEPING, TITLE OF F ONTACT FOR REVIEW OF RECORD	PERSON RESPONSIBLE FOR
PARAMETER	METHOD OF RECORDKEEPING	TITLE OF PERSON RESPONSIBLE	TITLE OF CONTACT PERSON
EO conc	PM Records	General Manager	EH&S
Liquor Level	PM records	General Manager	EH&S
c) IS COMPLIANCE OF THE THE RECORDS?	EMISSION UNIT READILY	DEMONSTRATED BY REVIEW OF	
IF NO. EXPLAIN:			
ii No Exi Exit			
d) ARE ALL RECORDS REA SUBMITTAL TO THE AGE	ADILY AVAILABLE FOR INSF ENCY UPON REQUEST?	PECTION, COPYING AND	XES O NO
IF NO, EXPLAIN:			
34a) DESCRIBE ANY MONIT	ORS OR MONITORING ACT	TIVITIES USED TO DETERMINE FEB	ES, RULE APPLICABILITY OR
COMPLIANCE: Monitor and record the I			
Monitor the EtO concen			
LANGUAT DADAHETEO/CAL	CARE DEING MONITORE	O /E G VOM EMISSIONS TO ATMO	SPHERE\2
Level of scrubber liquor		O (E.G., VOM EMISSIONS TO ATMO	or richeji
EtO levels from the Dry			
c) DESCRIBE THE LOCATI	ON OF EACH MONITOR (E.	G., IN STACK MONITOR 3 FEET FR	OM EXIT):

34d) IS EACH MONITOR EQUIPPED	WITH A RECORDING DEVICE?	>		YES	O NO
IF NO, LIST ALL MONITORS WITH	OUT A RECORDING DEVICE:			<u> </u>	
N/A					
e) IS EACH MONITOR REVIEWED FOI BASIS?	R ACCURACY ON AT LEAST A	QUARTERLY	,	YES	O NO
IF NO, EXPLAIN:					
N/A					
f) IS EACH MONITOR OPERATED AT	ALL TIMES THE ASSOCIATED	EMISSION U	NIT IS	O vec	X) NO
IN OPERATION?				U YES	NO NO
IF NO, EXPLAIN:					
No continuous monitoring is requ	uired.				
35) PROVIDE INFORMATION ON THE A PURPOSES OF THE DETERMINATI	MOST RECENT TESTS, IF ANY	, IN WHICH T	HE RESU	LTS ARE USED	FOR
DATE, TEST METHOD USED, TEST	ING COMPANY, OPERATING (CONDITIONS	EXISTING	3 DURING THE T	EST AND A
SUMMARY OF RESULTS. IF ADDIT	TONAL SPACE IS NEEDED, AT			EXHIBIT 220-4:	
TEST DATE TEST METHOD	TESTING COMPANY	OPERATII CONDITIO		SUMMARY OF	RESULTS
1/21/03	Kremer Env.	Normal		> 99% effici	
36) DESCRIBE ALL REPORTING REQUI SUBMITTALS TO THE AGENCY:	IREMENTS AND PROVIDE THE	TITLE AND I	FREQUE	ICY OF REPORT	ſ
REPORTING REQUIREMENTS	TITLE OF REPORT			FREQUENCY	
Excess emissions				*	
Excess emissions	Excess emissions		semi-a	nnual	
				·	

					(37)	MISSION	(37) EMISSION INFORMATION				
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	O 1ACTUAL EMISSION RATE O 1UNCONTROLLED EMISSION RATE	1		ALLOWABLE B'	ALLOWABLE BY RULE EMISSION RATE	N RATE	PERMITTED EMISSION RATE	SION RATE
REGULATED AIR POLLUTANT		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	³ OTHER TERMS	3OTHER TERMS	4DM	⁵ RATE (UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON	MAXIMUM:						()				
MONOXIDE (CO)	TYPICAL:						()				
LEAD	MAXIMUM:						()				
	TYPICAL:						()				
NITROGEN	MAXIMUM:						()				
OXIDES (NOx)	TYPICAL						^)				
PARTICULATE	MAXIMUM:						()				
MATTER (PART)	TYPICAL						()				
PARTICULATE MATTER <= 10	MAXIMUM						()				
MICROMETERS (PM10)	TYPICAL:						()				
SULFUR	MAXIMUM:						()				
DIOXIDE (SO2)	TYPICAL					450	()				
VOLATILE	MAXIMUM:				2000		()				
MATERIAL (VOM)	TYPICAL:)				
OTHER, SPECIFY:	MAXIMUM:	See Ex.	220-a)				
	TYPICAL:						î				
EXAMPLE: PARTICULATE	MAXIMUM:	2.00	21.9	0.3 GR/DSCF		1	6.0 (LBS/HR)	212.321	26.28	5.5 LBS/HR	22
MATTER	TYPICAL:	4.00	14.4	0.24 GR/DSCF		4	5.5 (LBS/HR)	212.321	19.80		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-5.

1CHECK UNCONTROLLED EMISSION RATE BOX IF CONTROL EQUIPMENT IS USED, OTHERWISE CHECK AND PROVIDE THE ACTUAL EMISSION RATE TO ATMOSPHERE, INCLUDING INDOORS. SEE INSTRUCTIONS.
2PROVIDE THE EMISSION RATE THAT WILL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.
3P.EASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIAL LIMITATION OF THAT WAS MEASURED (E.G. PPM, GRUDSCF, ETC.)
4DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP 42 OR AIRS), 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP 42 OR AIRS)
5RATE - ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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			(38) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION	AIR POLLUTAN	IT EMISSION IN	FORMATIO	N	
			O 1ACTU	1ACTUAL EMISSION RATE 1UNCONTROLLED EMISSION RATE	TE SION RATE		ALLOWABLE BY RULE	ULE
NAME OF HAP EMITTED	2CAS NUMBER		POUNDS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	30THER TERMS	4DM	5RATE OR STANDARD	APPLICABLE
Ethylene Oxide	75-21-8	MAXIMUM	See Exhibit	220-a				
		TYPICAL						
Propylene Oxide	75-56-9	MAXIMUM	See Exhibit	220-a				
		TYPICAL						
		MAXIMUM:						
		TYPICAL						
		MAXIMUM:						
		TYPICAL						
		MAXIMUM:						
		TYPICAL						
		MAXIMUM			!			
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM:						
		TYPICAL						
EXAMPLE:		MAXIMUM:	10.0	1.2		2	98% by wt control device	CFR 61
Benzene	71432	TYPICAL	8.0	0.8		2	leak-tight trucks	61.302(b),(d)
INDORTANT: ATTACH CALCIII ATTONS TO THE EXTENT TALEY ARE ARE GARGEOINE DEL ATTACH CARGO MENOR PARTICULAR AND AND AND AND AND AND AND AND AND AND	THE TOTAL THE	XTENT THEY A	IDE AID EMISSIONS DEI	ATED ON WALLOW CITY	TOTAL GIACION			

IMPONTANT: ATTACH CALCULATYONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEI, AS EXHIBIT 220-6.

¹PROVIDE UNCONTROLLED EMISSIONS IF CONTROL EQUIPMENT IS USED. OTHERWISE, PROVIDE ACTUAL EMISSIONS TO THE ATMOSPHERE, INCLUDING INDOORS. CHECK BOX TO SPECIFY.

²CAS - CHEMICAL ABSTRACT SERVICE NUMBER.

³PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GRUDSCF, ETC.).

⁴DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP42 OR AIRS, 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP42 OR AIRS).

⁵RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

		T INFORMATION		
THIS SECTION SHOULD NOT BE COMPLETED		XHAUSTED THROUGH A	IR POLLUTION CONTROL EQUIPMENT.	
39) FLOW DIAGRAM DESIGNATION OF E				
WB1 Scrubber #2 with dry bed				
40) DESCRIPTION OF EXHAUST POINT (DISCHARGES INDOORS, DO NOT CO	STACK, VENT, ROO DMPLETE THE REN	OF MONITOR, INDOO MAINING ITEMS.	RS, ETC.). IF THE EXHAUST POINT	
Outside Stack				
41) DISTANCE TO NEAREST PLANT BOU	INDARY FROM EXI	AUST POINT DISCH	ARGE (FT):	
approx 20 feet				
42) DISCHARGE HEIGHT ABOVE GRADE	(FT):			
approx 30 feet				
43) GOOD ENGINEERING PRACTICE (GE	P) HEIGHT, IF KNO	OWN (FT):		
Unknown				
44) DIAMETER OF EXHAUST POINT (FT) 1.128 TIMES THE SQUARE ROOT OF	THE ADEA	ON CIRCULAR EXHAL inches	ST POINT, THE DIAMETER IS	
45) EXIT GAS FLOW RATE	a) MAXIMUM (ACF	M):	b) TYPICAL (ACFM):	
	15	,500	15,500	
46) EXIT GAS TEMPERATURE	a) MAXIMUM (*F):		b) TYPICAL (*F):	
	арр	rox 75	арргох 75	
47) DIRECTION OF EXHAUST (VERTICAL	, LATERAL, DOWN	IWARD):		
Vertical				
48) LIST ALL EMISSION UNITS AND CONTROL DEVICES SE		RVED BY THIS EXH	AUST POINT:	
NAME		FLO	W DIAGRAM DESIGNATION	
a) Aeration Rooms (current)		AR		
b) Sterilizer Backvent SC1, SC2	SC3, SC4	Backvent		
c) Backup for Sterlizer Chamber			vacuum pump	
d)	· · · · · · · · · · · · · · · · · · ·			
e)				
THE FOLLOWING INFORMATION NEED ONLY	BE SUPPLIED IF REAL	DILY AVAILABLE. b) LONGITUDE:		
49a) LATITUDE:		a) LONGITUDE:		
50) UTM ZONE:	b) UTM VERTICAL	L (KM):	c) UTM HORIZONTAL (KM):	



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL – PERMIT SECTION P.O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

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Source Desi	ignation:	
		_

	FOR AGENCY USE ONLY
PROCESS EMISSION UNIT	ID NUMBER:
DATA AND INFORMATION	EMISSION POINT #:
	DATE:

	SOURCE INFORMATION	
1) SOURCE NAME:		
Sterigenics US, LLC		
2) DATE FORM PREPARED: 30 May 2018	3) SOURCE ID NO. (IF KNOWN): 043110AAC	

GENERAL II	GENERAL INFORMATION			
NAME OF EMISSION UNIT: Sterilization Chambers (3 thirteen pallet and 1 tw	venty-six pallet capacity) SC-4			
5) NAME OF PROCESS:				
Sterilization of medical products and spices				
6) DESCRIPTION OF PROCESS:	· · · · · · · · · · · · · · · · · · ·			
Chemical Sterilization				
7) DESCRIPTION OF ITEM OR MATERIAL PRODUCED OR A	CTIVITY ACCOMPLISHED:			
Sterilized Medical Supplies and Treated Spices				
8) FLOW DIAGRAM DESIGNATION OF EMISSION UNIT:				
Sterilizer Chambers				
9) MANUFACTURER OF EMISSION UNIT (IF KNOWN):	<u> </u>			
Unknown				
10) MODEL NUMBER (IF KNOWN):	11) SERIAL NUMBER (IF KNOWN):			
unknown	unknown			
12) DATES OF COMMENCING CONSTRUCTION,	a) CONSTRUCTION (MONTH/YEAR):			
OPERATION AND/OR MOST RECENT MODIFICATION OF THIS EMISSION UNIT (ACTUAL OR PLANNED)	July 1999			
	b) OPERATION (MONTH/YEAR):			
	October 1999			
	c) LATEST MODIFICATION (MONTH/YEAR):			
	October 2012			
13) DESCRIPTION OF MODIFICATION (IF APPLICABLE)				

13) DESCRIPTION OF MODIFICATION (IF APPLICABLE):

The sterilization chambers includes the chamber vent (via vacuum pump) and the chamber exhaust vent (backvent) as one emission unit. The chamber exhaust vent currently exhausts uncontrolled to atmosphere. This modification proposes to control the backvents with the existing WBII AAT scrubber and dry beds.

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

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FOR APPLICANT'S USE

14) DOES THE EMISSION UNIT HAV	Æ MOI	RE THAN ONE	MODE	OF O	PERATIO	N?	(YE:	s	O NO
IF YES, EXPLAIN AND IDENTIFY A SEPARATE PROCESS EMISSI FOR EACH MODE):	ION UN	NIT FORM 220	-CAAP	P MUS	T BE CO	MPLE	TED			
The sterilization chambers incl	udes	the chambe	r vent	(via v	acuum	pun	p) and the	chaml	oer (exhaust
vent (backvent) as one emission	n uni	t. The chan	nber b	ackve	ent modi	fica	tion is cove	red by	this	s form. The
chamber vent is also controlled	i by V	VBII AAT So	rubbe	r and	dry bed	l.				
15) PROVIDE THE NAME AND DESI EMISSION UNIT, IF APPLICABLE MUST BE COMPLETED FOR EA	E (FOR CH ITE	M 260-CAAPF M OF AIR PO	AND 1	THE AF	PROPRIA	ATE :	260-CAAPP A 'MENT):	DDENE	DUM	FORM
The chamber backvent is curre	ently L	incontrolled	This	appli	cation p	гор	oses to duc	t the c	han	nber
exhaust vent (backvent) to the					with Dr	у Ве	ed Reactor.	The ir	ifor	mation
provided below is required for t										
16) WILL EMISSIONS DURING STAF RATE PURSUANT TO A SPECIF ESTABLISHED BY AN EXISTING	IC RU	LE, OR THE A	LLOWA	VBLE E	MISSION	LIM	SION (☐ YE	S	NO NO
IF YES, COMPLETE AND ATTAC EXCESS EMISSIONS DURING S	TART	UP OF EQUIP	MENT"							
17) PROVIDE ANY LIMITATIONS ON STANDARDS (E.G., ONLY ONE	SOU	RCE OPERATED	ION AF	FECTI	NG EMIS	SION	IS OR ANY W	ORK PI	RAC	TICE
Usage limitations for total prop	vlene	oxide and	ethyle	ne oxi	ide shall	not	exceed 40	,800 p	oun	ds per
month and 244200 pounds per	уеаг	for all emis	sion u	nits ir	Willow	broc	k II.			
	•									
										İ
		OPERATI	NG IN	FOR	MATION	ī				
18) ATTACH THE CALCULATIONS,	то тн	E EXTENT TH	EY AR	E AIR	EMISSIO	N RE	LATED, FROM	M WHIC	H TI	-IE
FOLLOWING OPERATING INFO BASED AND LABEL AS EXHIBIT	RMAT	ION, MATERIA	AL USA	GE INI	FORMATI	ON A	ND FUEL US	AGE D	ATA	WERE
19a) MAXIMUM OPERATING HOUR	S	HOURS/DAY	(ia		DAYS/M	/EEK	:	MEEK		
8760 per year		24	4			7				52
b) TYPICAL OPERATING HOURS	;	HOURS/DAY	/:		DAYS/V	VĚEK	(:	WEEK	S/YI	EAR:
8600 per year		2	4			_ 7				
20) ANNUAL THROUGHPUT		DEC-FEB(%):	MAR	-MAY(%):		JUN-AUG(%	6):	SE	P-NOV(%):
		25			25		25			25
	M	ATERIAL U	ISAGI	EINF	ORMAT	ION				
		MAXIML	JM RAT	ES		ſ	T	YPICAL	RA1	TES
21a) RAW MATERIALS	ı	BS/HR	-	ΓΟΝS/	YEAR		LBS/HR			TONS/YEAR
EO and PO					122.1					
										· · · · · · · · · · · · · · · · · · ·
			\vdash			h				

1		MAXIN	JUM	RATES	Γ	TYPIC	AL F	RATES
21b) PRODUCTS	I	LBS/HR		TONS/YEAR	-	LBS/HR		TONS/YEAR
N/A			1 '		ľ			
			1 1		Ì			-
			1 !		F	-		
			1				1	
			1		1	-		
			1		+			
ſ		MAXIN	IUM	RATES	F	TYPIC	AL F	RATES
21c) BY-PRODUCT MATERIALS	L	LBS/HR	П	TONS/YEAR	+	LBS/HR	П	TONS/YEAR
N/A			11		t			
							1	
					l		1	
					-		1	
	-				-		1	
			<u> </u>		<u> </u>			
22a) MAXIMUM FIRING RATE		FUE		SAGE DATA ING RATE	<u> </u>	c) DESIGN CAPAC	- -1 Τ Υ	FIRMS
(MILLION BTU/HR):		(MILLION	N BTL	U/HR):		RATE (MILLION	N BTI	U/HR):
N/A			N	I/A		N	I/A	
d) FUEL TYPE:								
ONATURAL GAS OFUE								
IF MORE THAN ONE FUEL IS U			EXP	LANATION AND LABI	EL	AS EXHIBIT 220-2.		
e) TYPICAL HEAT CONTENT OF F BTU/GAL OR BTU/SCF):	:UEL (I	BTU/LB,		f) TYPICAL SULF GAS):	UR	CONTENT (WT %	., NA	A FOR NATURAL
g) TYPICAL ASH CONTENT (WT 9 GAS):	%., NA	FOR NATU	RAL			JSAGE (SPECIFY L YEAR, TON/YEAR		S, E.G.,
23) ARE COMBUSTION EMISSIONS PROCESS UNIT EMISSIONS?	3 DUC	TED TO THE	SAI	ME STACK OR CONT	RO	LAS) YE	ES ONO
IF NO, IDENTIFY THE EXHAUST	r POIN	IT FOR COM	/BUS	STION EMISSIONS:				

	APPLICABLE RULES	
24) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITAT) AND LIMITATION(S) SET BY RULE(S) WHICH ARE API	ION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218,204(j)(4), 3.5 LBS/GAL):
REGULATED AIR POLLUTANT(S)	EMISSION STANDARD(S)	REQUIREMENT(S)
VOM	35 IAC 218.302(b)	At least 85% recovery of total uncontrolled org. mat.
HAP	40CFR 63.362	99% reduction
NOM	35 IAC218.986(a)	Capture & Control > 81%
25) PROVIDE ANY SPECIFIC RECORDKEEPING RULE	25) PROVIDE ANY SPECIFIC RECORDKEEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:	
REGULATED AIR POLLUTANT(S)	RECORDKEEPING RULE(S)	REQUIREMENT(S)
Standards don't apply to backvent	40 CFR 63.10	MACT recordkeeping and reporting
but do apply to WBII AAT		
26) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE APP	HICH ARE APPLICABLE TO THIS EMISSION UNIT:	
REGULATED AIR POLLUTANT(S)	REPORTING RULE(S)	REQUIREMENT(S)
Standards don't apply to backvent	40 CFR 63.10	MACT recordkeeping and reporting
but do apply to WBII AAT		
27) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT	WHICH ARE APPLICABLE TO THIS EMISSION UNIT:	
REGULATED AIR POLLUTANT(S)	MONITORING RULE(S)	REQUIREMENT(S)
HAP monitoring applies to	40CFR 63.364	Weekly Scrubber liquor level
WBII AAT	40CFR 63.364	Weekly EO concentration from dry beds
		Weekly pH
		WICE CONTINUE -
28) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDUR	ES <	MISSION ONLL :
REGULATED AIR POLLUTANT(S)	LESTING KULE(S)	
HAP applies to WBII AAT	40 CFR63.365	Testing of control equipment

29) DOES THE EMISSION U OTHERWISE APPLICAB	JNIT QUALIFY FOR AN EXEM BLE RULE?	IPTION FROM AN	O YES	⊗ NO			
EXEMPTION. PROVIDE SUPPORTING DATA AN	A DETAILED EXPLANATION	IT IS EXEMPT AND THE RULE W I JUSTIFYING THE EXEMPTION. I AND LABEL AS EXHIBIT 220-3, HIS EXEMPTION.	INCLUDE DETA	II FD			
	COMPLIAN	ICE INFORMATION					
30) IS THE EMISSION UNIT REQUIREMENTS?	IN COMPLIANCE WITH ALL	APPLICABLE		O NO			
IF NO, THEN FORM 294- COMPLYING EMISSION	CAAPP "COMPLIANCE PLAN UNITS" MUST BE COMPLET	N/SCHEDULE OF COMPLIANCE - ED AND SUBMITTED WITH THIS	- ADDENDUM FO APPLICATION.	OR NON			
31) EXPLANATION OF HOW	INITIAL COMPLIANCE IS TO	BE, OR WAS PREVIOUSLY, DE	MONSTRATED:	-			
	opylene oxide usage is t	racked monthly.		j			
WBII AAT was tested [December 13, 2016						
32) EXPLANATION OF HOW	ONGOING COMPLIANCE W	ILL BE DEMONSTRATED:					
Records of Ethylene Ox	vide (EO) and Propulane	Oxide (PO) usage. (monthly					
		level weekly, pH weekly.	y)				
EO concentration is che	scked weekly to determin	ne proper operation of the D	ry Bed Unit.				
TESTING, MONITORING, RECORDKEEPING AND REPORTING							
33a) LIST THE PARAMETERS THAT RELATE TO AIR EMISSIONS FOR WHICH RECORDS ARE BEING MAINTAINED TO							
METHOD OF MEASURE	E APPLICABILITY OR COMP	PLIANCE. INCLUDE THE UNIT OF CY OF SUCH RECORDS (E.G., H	F MEASUREMEN	IT, THE			
METHOD OF MEASURE	MENT, AND THE FREQUENT	OT OF SUCH RECORDS (E.G., H	OURLY, DAILY, 1	WEEKLY):			
				- 1			
PARAMETER	UNIT OF MEASUREMENT	METHOD OF MEASUREMENT	FREC	UENCY			
Sterilant Usage	pounds	Operating data	monthly				
Liquor level	inches	Operating data	weekly				
EO conc	ppm	GLC from dry bed	weekly				
			-	I			
			1				
			j				

RECORDED PARAME	TER INCLUDE THE METHOD	CORDS WILL BE CREATED AND A OF RECORDKEEPING, TITLE OF ONTACT FOR REVIEW OF RECOR	PERSON RESPONSIBLE FOR
PARAMETER	METHOD OF RECORDKEEPING	TITLE OF PERSON RESPONSIBLE	TITLE OF CONTACT PERSON
Sterilant usage	Operating report	General Manager	EH&S
Liquor Level	PM records	General Manager	EH&S
EO conc	PM Records	General Manager	EH&S
c) IS COMPLIANCE OF TH THE RECORDS?	IE EMISSION UNIT READILY	DEMONSTRATED BY REVIEW OF	X YES NO
IF NO, EXPLAIN:			
d) ARE ALL RECORDS RE	ADILY AVAILABLE FOR INSE	PECTION, COPYING AND	X YES NO
	SENCT UPON REQUEST?		
IF NO, EXPLAIN:			
:			
	ITODO OD MONITORINO AC	TIVITIES USED TO DETERMINE FE	ES RULE APPLICABILITY OR
COMPLIANCE:			
Monitor and record the	level of the scrubber liqu	uor in recirculation tank.	
Monitor the EtO conce	ntration entering and exi	ting the AA I Dry Beas.	
NWHAT PADAMETED/S	IS/ARE) REING MONITOREI	D (E.G., VOM EMISSIONS TO ATMO	DSPHERE)?
Level of scrubber liquo		<u> </u>	•
EtO levels from the AA			
c) DESCRIBE THE LOCA	TION OF EACH MONITOR (E.	G., IN STACK MONITOR 3 FEET FF	ROM EXIT):
of proportion that took			

34d) IS EACH MONITOR EQUIPPED	WITH A RECORDING DEVICE	?		YES	
IF NO, LIST ALL MONITORS WITH	OUT A RECORDING DEVICE:			U TES	О мо
N/A					
e) IS EACH MONITOR REVIEWED FO BASIS?	OR ACCURACY ON AT LEAST.	A QUARTERI	Y	YES	O NO
IF NO, EXPLAIN:					
N/A					
f) IS EACH MONITOR OPERATED AT IN OPERATION?	T ALL TIMES THE ASSOCIATED	EMISSION	UNIT IS	YES	× NO
IF NO, EXPLAIN:					
No continuous monitoring is req	uired.				
35) PROVIDE INFORMATION ON THE	MOST RECENT TESTS, IF ANY	, IN WHICH	THE RESI	JLTS ARE USED	FOR
PURPOSES OF THE DETERMINAT DATE, TEST METHOD USED, TEST	TING COMPANY, OPERATING	CONDITION:	SEXISTIN	G DURING THE 1	E TEST EST AND A
SUMMARY OF RESULTS. IF ADDI	TIONAL SPACE IS NEEDED, A	TTACH AND	LABEL AS	EXHIBIT 220-4:	
TEST DATE TEST METHOD	TESTING COMPANY	OPERAT CONDITI		SUMMARY OF	RESULTS
1/21/03	Kremer Env.	Normal		> 99% effici	
		11001	_		Siloy .
26) DESCRIPE ALL PEROPTING PEOL	UDENENTS AND SOOTER TH				
36) DESCRIBE ALL REPORTING REQU SUBMITTALS TO THE AGENCY:	JIKEMEN IS AND PROVIDE 111	E TITLE AND	FREQUE	NCY OF REPORT	
REPORTING REQUIREMENTS	TITLE OF REPORT			FREQUENCY	
Annual emissions report	Annual emissions rep	oort	annua		
Excess emissions	Excess emissions		semi-a	nnual	

					(37)Ei	MISSION IN	(37)EMISSION INFORMATION				
			1 ACTUAL EMISSION RATE 1 UNCONTROLL ED EMISSK	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RATE		ALLOWABLE BY	ALLOWABLE BY RULE EMISSION RATE	NRATE	² PERMITTED EMISSION RATE	SION RATE
REGULATED AIR POLLUTANT		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	3OTHER TERMS	³ OTHER TERMS	4рм	⁵ RATE (UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON	MAXIMUM:						()				
MONOXIDE (CO)	TYPICAL:						()				
LEAD	MAXIMUM:						()				
	TYPICAL:						()				
NITROGEN	махімим:						()				
OXIDES (NOx)	TYPICAL:						()				
PARTICULATE	махамим:						\(\)				
MATTER (PART)	TYPICAL:						()				
PARTICULATE MATTER <= 10	MAXIMUM:						()				
MICROMETERS (PM10)	TYPICAL:					315)				
SULFUR	MAXIMUM						()				
DIOXIDE (SO2)	TYPICAL:										
VOLATILE	MAXIMUM:)				
MATERIAL (VOM)	TYPICAL:						· ·				
OTHER, SPECIFY:	MAXIMUM:	See Ex.	220-a								
	TYPICAL:										
EXAMPLE: PARTICULATE	MAXIMUM	5.00	21.9	0.3 GRØSCF		1	6.0 (LBS/HR)	212.321	26.28	5.5 LBS/HR	22
MATTER	TYPICAL	4.00	14.4	0.24 GR/DSCF		4	5.5 (LBS/HR)	212.321	19.80		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-5.

1CHECK UNCONTROLLED EMISSION RATE BOX IF CONTROL EQUIPMENT IS USED, OTHERWISE CHECK AND PROVIDE THE ACTUAL EMISSION RATE TO ATMOSPHERE, INCLUDING INDOORS. SEE INSTRUCTIONS.
2PROVIDE THE EMISSION RATE THAT WILL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.
3PICASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G. PPM, GRUDSCF, ETC.)
4DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP42 OR AIRS). 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP42 OR AIRS)
5RATE - ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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		(3	(38) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION	AIR POLLUTAN	IT EMISSION IN	IFORMATIO	~	
			O 1ACTU	1ACTUAL EMISSION RATE 1UNCONTROLLED EMISSION RATE	TE SION RATE		ALLOWABLE BY RULE	ш
NAME OF HAP EMITTED	2cas NUMBER		POUNDS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	³ OTHER TERMS	4DM	⁵ RATE OR STANDARD	APPLICABLE
Ethylene Oxide	75-21-8	МАХІМОМ	See Exhibit	220-a				
		TYPICAL						
Propylene Oxide	75-56-9	MAXIMUM	See Exhibit	220-a				
		TYPICAL.						
		MAXIMUM						
		TYPICAL						
:		MAXIMUM:						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM			:			
		TYPICAL:						
		MAXIMUM						
		TYPICAL						
		MAXIMUM:						
		TYPICAL						
EXAMPLE:		MAXIMUM:	10.0	1.2	Test less	2	98% by wt control device	CFR 61
Benzene	71432	TYPICAL:	8.0	8.0	334	2	leak-tight frucks	61.302(b),(d)
IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.	CULATIONS, TO THE	EXTENT THEY A	RE AIR EMISSIONS REL	ATED, ON WHICH EMI	SSIONS WERE DETE	RIMINED AND LA	BEL AS EXHIBIT 220-6.	

LIED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.

¹PROVIDE UNCONTROLLED EMISSIONS IF CONTROL EQUIPMENT IS USED. OTHERWISE, PROVIDE ACTUAL EMISSIONS TO THE ATMOSPHERE, INCLUDING INDOORS. CHECK BOX TO SPECIFY.

2CAS - CHEMICAL ABSTRACT SERVICE NUMBER.

³PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED. REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GRUDSCF, ETC.).

⁴DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP → 2 OR AIRS, 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP → 42 OR AIRS).

⁵RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

		T INFORMATION		
THIS SECTION SHOULD NOT BE COMPLETED	IF EMISSIONS ARE E	XHAUSTED THROUGH A	IR POLLUTION CONTROL EQUIPMENT.	
39) FLOW DIAGRAM DESIGNATION OF E	XHAUST POINT:			
WBII AAT Scrubber with dry be				
40) DESCRIPTION OF EXHAUST POINT (DISCHARGES INDOORS, DO NOT CO	STACK, VENT, RO OMPLETE THE REM	OF MONITOR, INDOO MAINING ITEMS.	RS, ETC.). IF THE EXHAUST POINT	
Outside Stack				
41) DISTANCE TO NEAREST PLANT BOU	INDARY FROM EXI	HAUST POINT DISCH	ARGE (FT):	
approx 100 feet				
42) DISCHARGE HEIGHT ABOVE GRADE	(FT):			
approx 32 feet			ì	
43) GOOD ENGINEERING PRACTICE (GE	P) HEIGHT, IF KNO	OWN (FT):		
Unknown				
44) DIAMETER OF EXHAUST POINT (FT)	NOTE: FOR A NO	N CIRCULAR EXHAU	ST POINT, THE DIAMETER IS	
1.128 TIMES THE SQUARE ROOT OF	THE AREA 24	inches		
45) EXIT GAS FLOW RATE	a) MAXIMUM (ACI	=M):	b) TYPICAL (ACFM):	
-	11	,500	11,500	
46) EXIT GAS TEMPERATURE	a) MAXIMUM (*F):		b) TYPICAL (*F):	
	арр	rox 75	approx 75	
47) DIRECTION OF EXHAUST (VERTICAL	, LATERAL, DOWN	(WARD):		
Vertical				
48) LIST ALL EMISSION UNITS AND CON	TROL DEVICES SE	ERVED BY THIS EXHA	AUST POINT:	
NAME		FLOW DIAGRAM DESIGNATION		
a) WBII Aeration Rooms (curren	t)	AR		
b) Sterilizer Backvent SC4		Backvent		
c) Sterlizer Chambers SC4 (cur	rent)	vacuum pump		
d)				
e)				
5,				
	ne ou look leek le ceek	DILV AVAILABLE		
THE FOLLOWING INFORMATION NEED ONLY 49a) LATITUDE:	BE SUPPLIED IF REA	b) LONGITUDE:		
•				
50) UTM ZONE:	b) UTM VERTICA	L (KM):	c) UTM HORIZONTAL (KM):	
,				

EXHIBIT 220-A

2017 Emission Calculations for Commercial Sterilization Chambers at Sterigenics US LLC Willowbrook

2017 Usage		Willowbrook I	Willowbrook II	Willowbrook I & II	
Ethylene Oxide (EO) Usage:	lbs/yr	284,077	139635	423,712	
Propylene Oxide (PO) Usage:	lbs/yr	0	0	0	
		:		i	
	EO Uncontrolled	PO Uncontrolled	Required Control	EO Controlled	70
	Emissions	Emissions	Efficiency	Emissions	
2017 Emissions for Willowbrook I and II	lb/yr	lb/yr		łb/уг	
Sterilizer Vacuum Pump Emissions (95%)	402526.4	0.0	99.00%	4025.3	
Sterilizer Back Vent Emissions (1%)	4237.1	0.0	0	4237.1	
Aeration Emissions (4%)	16948.5	0.0	99.00%	169.5	

PO Controlled Emissions lb/yr

	2017 HAP/VOM Controlled Emissions
4.22	8432
tons/yr	lb/yr

Based on required Control Efficiencies

Assumptions:

423712

0.0 0

8431.9

0.0 0.0 0.0

- 1. 95% of all emissions are drawn off in the sterilization chamber.
- 1% of all emissions are drawn off in the back vent.
- 4% of all emissions are drawn off in the aeration room.
- The scrubbers destruction efficiency is required to be a minimum of 99.0% for each scrubber system
- 5. Previous performance testing of each scrubber demonstrated control efficiencies of at least 99.9%.
- 6. Willowbrook I includes SC-1, 2, 3, and 5. Willowbrook II includes SC-4.
- 7. Boiler emissions are not included.

		4

EXHIBIT 220-B

Potential To Emit for Commercial Sterilization Chambers at Sterigenics US LLC in Willowbrook, IL

Maximum Permitted Usage		WBI	WB II	WB & II ⁵
Ethylene Oxide Permitted Usage:	lbs/yr	840000	244200	1084200
Propylene Oxide Permitted Usage:	lbs/yr	33600	244200	33600
Total HAP and VOM Usage:	lbs/yr	873600	244200	1117800

Proposed Potential to Emit

		HAP Uncontrolled Emissions lb/yr	Current Potential t Currently Required Control Efficiency	otential to Emit Calculation ntly HAP Controlled Control Emissions ency lb/yr	Calculation Proposed HAP Required Control E	HAP Controlled Emissions
Willowbrook 1	Sterilizer Vacuum Pump Emissions (95%)	829920	99.00%	8299.2	99.0%	8299.2
(SC-1 SC-2 SC-3 SC-5)	Sterilizer Back Vent Emissions (1%)	8736	0	8736.0	99.0%	87.4
(30-1, 30-2, 30-3, 30-3)	Aeration Emissions (4%)	34944	99.00%	349.4	99.0%	349.4
Millowhrook 2	Sterilizer Vacuum Pump Emissions (95%)	231990	99.00%	2319.9	99.0%	2319.9
(CC-V)	Sterilizer Back Vent Emissions (1%)	2442	0	2442.0	99.0%	24.4
(30-4)	Aeration Emissions (4%)	9768	%00.66	97.7	99.0%	97.7

Potential to Emit of HAP and VOM	Existing	ting	New	W
Willowbrook 1 Sterilization	17384.6	lb/yr	8736.0	lb/yr
Willowbrook 2 Sterilization	4859.6	lb/yr	2442.00	lb/yr
Total for Willowhrook Starilization	22244.2	lb/yr	11178.0	lb/yr
TOTAL TO WILLOW DICON JUST HILLAUGH	11.1	tons/yr	5.6	tons/yr

Note

- *Ethylene Oxide and Propylene Oxide are HAPs and VOMs
- 1. 95% of all emissions are drawn off in the sterilization chamber.
- 2. 1% of all emissions are drawn off in the back vent.
- 3. 4% of all emissions are drawn off in the aeration room.
- The scrubbers destruction minimum efficiency is 99.0% for each scrubber system (40 CFR Part 63 Subpart 0)
- 5. Assume combined WBII usage limit is for EO for calculations
- 6. Boiler emissions are not included.

ε.	*

EXHIBIT 220-C

Proposed Permit Limits for Commercial Sterilization Chambers at Sterigenics US LLC in Willowbrook, IL

STERILIZATION USAGE LIMITATIONS

Willowbrook 2 SC-4	Willowbrook 1 SC-1, 2, 3, 5	Usage		
40800	70000	lb/month	EO	Curr
00	2800	lb/month	РО	Current Permit Limits
122.1		tons/year	MOA	S.
40800	70000	lb/month	EO	Proposed
300	2800	lb/month	РО	sed Limits (No Cl
122.1		tons/year	MOV	range)

STERILIZATION EMISSION LIMITATIONS

0.05	0.01	1.16	Willowbrook 2 SC-4
0.175	0.044	4.15	Willowbrook 1 SC-1, 2, 3, 5
Aeration		Vacuum Pump BackVent	VOM Emissions (tons/year)
s PTE)	Proposed Limits (Same as PTE)	Proposed	

VOM West Aeration Emissions	Willowbrook 1		
3.60	lb/hr	Current Pe	
	Tons/month tons/year	Current Permitted Emission limits	
15.77	tons/year	ນກ limits	
90080038	Permit #	Construction	

VOM Aeration Emissions 0.05	VOM Total Emissions 0.41 2.38	VOM Back vent Emissions 0.21 1.22	VOM Vauum pump Emission 0.2 1.16	Willowbrook 2
11050010	11050010	11050010	11050010	

Note

^{*} Boiler emissions are not included.

16.



Illinois Environmental Protection Agency

Bureau of Air • 1021 North Grand Avenue East • P.O. Box 19506 • Springfield • Illinois • 62794-9506

FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION

			FOR AGENCY USE O	NLY		
	ID Numbe	г:	Permit #:			
	Check Nu		Date Complete: Account Name:			
En	vironmental Prote	sed to supply fee information lude payment in full to be de ection Agency, Division of Air (197-INST) for assistance.	emed complete. Make ci	neck or money order.	navable to	the Illinois
So	urce Informatio	on				
1.	Source Name:	Sterigenics US, LLC				
	Project Name:	Back Vent Emissions Contr	ol 3.	Source ID #: (if app	licable) 04	43110AAC
4.	Contact Name:	Laura Hartman		Contact Phone #:	630-928-	
Fe	e Determinatio	n				
6.	The boxes below	are automatically calculated	*			
	Section 1 Subtota		ection 2, 3 or 4 Subtotal	\$500.00	=	\$500.00
Sec	ction 1: Status	of Source/Purpose of S	uhmittal			Grand Total
7.	Your application v	will fall under only one of the able sections. For purposes	following five categories	described below. Ch	eck the box	that applies.
		urce is a source that is requ		ermit.		
	 Synthetic 	: Minor Source is a source i	that has taken limits on p	otential to emit in a p	ermit to avo	oid CAAPP permit
	requireme	ents (e.g.,FESOP).				P
7	Existing source	or Source is a source that is without status change or with	not a major or synthetic in this status change from syn	minor source. thetic minor to major	source	
		roceed to Section 2. jor source that will become s	synthetic minor to major s	ource Proceed to S	ection 4	
		nthetic minor source. Proce		00,000. 1 100000 (0 0	CCION 4.	
		source. Proceed to Section				\$0.00
						Section 1 Subtotal
Ш	Control Board. S	PR. If this is a timely request d if the request is received w Skip Sections 2, 3 and 4, Pro	ithin the deadline for a pe oceed directly to Section	ermit appeal to the Po 5	ollution	
ahhii	agency is authorize ication being denied	ed to require and you must disclo l and penalties under 415 ILCS l by the forms management cen	ose this information under 41 5 ET SEQ. It is not necessa	IS II CS 5/30 Follows to	do so could oviding this i	result in the nformation. This
Sec	tion 2: Special	Case Filing Fee				
8. F	iling Fee . If the sections 3 and 4	e application only address and proceed directly to S	ses one or more of the Section 5. Otherwise, p	following, check the	e appropri 3 or 4 as a	ate boxes, skip
	Addition or	r replacement of control d	evices on permitted ur	nits.		111
1		cts/trial burns by a permit				
		ediation projects			\$5	00.00
		related to methodology or	r timing for emission te	stina	40	00.00
		inistrative-type change to		- 111.1 3		
	2-2776 FEE Rev. 1/2012	Applicat	ion Page <u>73</u>			

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Section 3: Fees for Current or Projected Non-Major Sources

- This application consists of a single new emission unit or no more than two modified emission units. (\$500 fee)
- 10. This application consists of more than one new emission unit or more than two modified units. (\$1,000 fee)
- 11. This application consists of a new source or emission unit subject to Section 39.2 of the Act (i.e., Local Siting Review); a commercial incinerator or a municipal waste, hazardous waste, or waste tire incinerator; a commercial power generator; or an emission unit designated as a complex source by agency rulemaking. (\$15,000 fee)
- 12. A public hearing is held (see instructions). (\$10,000 fee)
- 13. Section 3 subtotal. (lines 9 through 12 entered on page 1)

13. \$0.00

Section 4: Fees for Current or Projected Major or Synthetic Minor Sources

	14. For the first modified emission unit, enter \$2,000.		
Application contains modified emission units only	15. Number of additional modified emission units = x \$1,000.		
	16. Line 14 plus line 15, or \$5,000, whichever is less.	16	\$0.00
Application contains	17. For the first new emission unit, enter \$4,000.		
new and/or modified emission units	18. Number of additional new and/or modified emission units = x \$1,000.		
	19. Line 17 plus line 18, or \$10,000, whichever is less.	19	\$0.00
Application contains netting exercise	Number of individual pollutants that rely on a netting exercise or contemporaneous emissions decrease to avoid application of PSD or nonattainment area NSR = x \$3,000.	20	\$0.00
	21. If the new source or emission unit is subject to Section 39.2 of the Act (i.e. siting); a commercial incinerator or other municipal waste, hazardous waste, or waste tire incinerator; a commercial power generator; or one or more other emission units designated as a complex source by Agency rulemaking, enter \$25,000.		
Additional	22. If the source is a new major source subject to PSD, enter \$12,000.		
Supplemental Fees	23. If the project is a major modification subject to PSD, enter \$6,000.		
	24. If this is a new major source subject to nonattainment area (NAA) NSR, enter \$20,000.	_	
	25. If this is a major modification subject to NAA NSR, enter \$12,000.		
	26. If the application involves a determination of MACT for a pollutant and the project is not subject to BACT or LAER for the related pollutant under PSD or NSR (e.g., VOM for organic HAP), enter \$5,000 per unit for which a determination is requested or otherwise required. x \$5,000.	26	\$0.00
	27. If a public hearing is held (see instructions), enter \$10,000.		
28. Section 4 subtot	al (line 16 and lines 19 through 28) to be entered on page1	28	\$0.0

Section 5: Certification

NOTE: Applications without a signed certification will be deemed incomplete.

29.	I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the information	nation
	contained in this fee application form is true, accurate and complete.	

by:	Lama Hartin	Manager, EH&S
·	Signature	Title of Signatory
	Laura Hartman	05 June 2018
	Typed or Printed Name of Signatory	Date